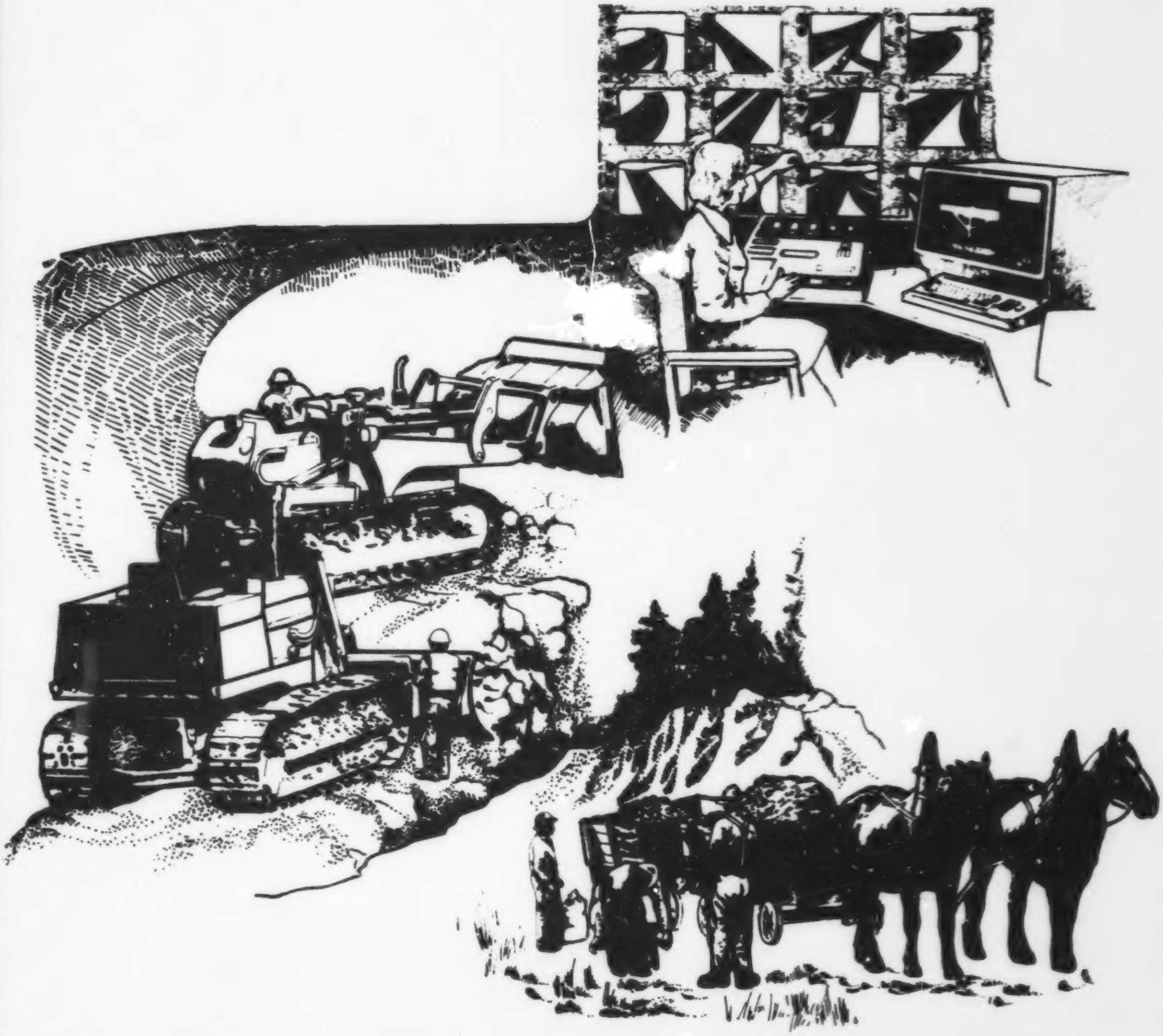
ANNUAL REPORT

1983 ~ 1984



Ontario

Ministry of
Transportation and
Communications

Annual Report
1983-1984

for the
fiscal year
ending
March 31, 1984

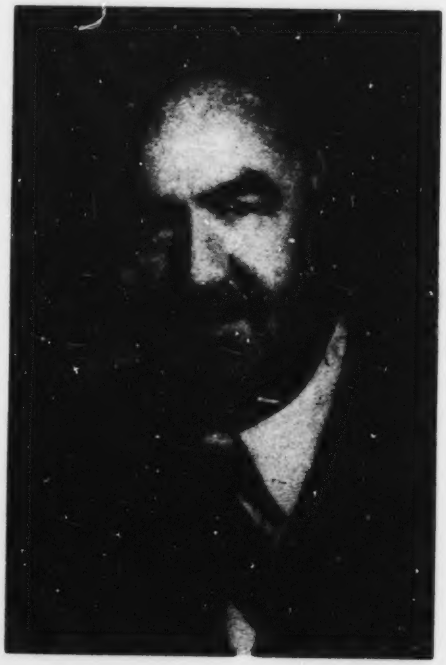
Ontario

Ministry of
Transportation and
Communications

To: The Honourable John B. Aird,
O.C., Q.C., L.L.D.
Lieutenant-Governor of the Province of Ontario

MAY IT PLEASE YOUR HONOUR:
The undersigned takes pleasure in laying before you the Annual Report for the Ministry of Transportation and Communications for the fiscal year ending March 31, 1984.

Respectfully submitted,



James Snow
Minister

To: The Honourable James Snow
Minister of
Transportation and Communications

Sir:

I have the honour to present the report of the activities of the Ministry of Transportation and Communications for the fiscal year ending March 31, 1984

Respectfully submitted,

Harold Gilbert

Harold Gilbert
Deputy Minister

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Deputy Minister's Summary

I'm happy to be able to report that MTC employees have successfully met a number of challenges during the past year and continued to provide a high level of service to Ontario's public.

And I must comment that it took successful ministry-wide dedication to achieve our collective goals.

Highways

Highlight of the 1983-84 construction program was the award of the largest dollar-volume contract ever tendered by the ministry for the twinning of the Burlington Bay Skyway. Work on the $38 million project began during the year and completion is slated for fall of 1985.

Total expenditures for highway and freeway construction amounted to $217,213,740 with an additional $204,452,582 spent on construction of municipal roads.

MTC continued to emphasize maintenance of the infrastructure with a total of $200,457,919 allocated to maintenance of the King's Highway network. Construction or repair work was completed on some 868 km of highway and new work was done on 129 bridges.

As part of the government's industrial expansion program, MTC received $25 million in BILD funds for major highway projects in southern Ontario's Golden Horseshoe. An additional $9 million was provided for job creation in road construction.

Major freeway projects begun during the year included: the widening and improving of the QEW in the Burlington/Hamilton corridor; the widening of Highway 401 west from Highway 427 to Highway 403 and the 403 south from Highway 401; construction on Highway 410/Brampton Bypass and on Highway 417, the Ottawa Queensway.

Work continued on Windsor's four-lane E.C. Row Expressway; Highway 406 in St. Catharines; and Highway 404 to Newmarket. Contracts were awarded for the widening of Highway 135/15 from Highway 2 to Taunton Rd. and the twinning of 6.9 km of Highway 7 from the Queensway easterly to Highway 7B. And plans were underway to provide a four-lane limited access highway along Highway 35/115.

In northern Ontario, the first link of the Kenora Bypass was officially opened and work completed in four-laning the Thunder Bay Expressway from Oliver Rd. to Balsam St. Also, the reconstruction of Highway 11/17 was completed between Thunder Bay and Kakabeka Falls.

Construction continued on the upgrading of Highway 400 between Highway 11 and Coldwater and improvements to Highway 11 four-laning the Callander Bypass.

Transportation Programs

Improved productivity and efficiency in public transit was the focus during the fiscal year with operational subsidies to municipalities totalling $111,261,680. Large capital expenditures on the Ottawa busway and the Scarborough rapid transit line resulted in capital assistance to the tune of $149,541,354 — more than doubling last year's expenditure. Also, a total of $16,915,000 in BILD funds was provided under the job creation program.

Planning for the new GO-ALRT inter-regional transit system linking Hamilton and Oshawa began, with approval given to the first extension from Pickering to Oshawa and studies were undertaken to designate a right-of-way for the remainder of the routes. The system will use advanced light rail transit technology developed by UTDC while design specifications for the vehicles, guideways and stations were started during the year.

During 1983-84, a total of 69 municipal transit systems received financial assistance, with municipalities introducing new major rapid transit facilities receiving special subsidies for the initial years of operation.

Continued progress was made on construction of the 7.2 km intermediate capacity transit system (ICTS) in Scarborough while the first section of the Ottawa-Carleton exclusive busway was opened with a significant portion operational in 1984.

Large capital expenditures, such as a bus garage in Metro Toronto, a bus terminal in Sault Ste. Marie and a maintenance facility on Hamilton's mountain will result in more efficient fleet maintenance and storage.

And a new subsidy policy for the provision of transportation for the physically disabled will promote more productive and cost-efficient services.

The Intercity Transportation Guide was produced during the year, in conjunction with the ministries of Northern Affairs and Energy, providing a useful guide to provincial public transportation modes.

Ontario's Urban Transportation Development Corporation (UTDC) made great strides in using the most advanced technology to produce highly efficient and marketable light rapid transit vehicles.

Highlights included a successful demonstration ride on a section of Vancouver's ALRT system, using UTDC vehicles; the signing of a $28.9 million (U.S.) contract to provide 30 ALRT vehicles for San Jose, California, to be built in Thunder Bay; and completion of the first ALRT vehicle in October of '83 for use on the Scarborough line.

Air Services

During the year, two new remote airports were officially opened at Deer Lake and at Sachigo Lake, ending the seasonal isolation of the residents. Construction of Kasabonika Airport was slated for completion in 1984 and work began on remote airports at Cat Lake and Muskrat Dam. There are now 19 remote airports across the north, built and maintained with MTC funds, with capital funding from MNA.

MTC also assisted in the planning, design and operation of municipal airports, subsidizing 46 municipalities with funds supplemented through the BILD program.

The air office continued its role of monitoring the level of air passenger services in Ontario, assessing air carriers' applications to the Canadian Transport Commission (CTC) and responding when appropriate.

Staff continued their involvement in implementing the Ministry of Health's system of medical emergency heliports at Ontario hospitals.

Development of an air system flight planner for Ontario, listed on Teleguide, was also initiated.

Marine Services

Marine and pipeline office staff fulfilled their mandate to advance Ontario's position on issues related to marine transportation in a number of ways.

Staff maintained contacts with provincial, federal, private and international organizations, preparing policy advice and responses on issues affecting Ontario.

Key programs and activities recommended in the Great Lakes/Seaway Task Force report were implemented during the year. A major project was the celebration of the 25th anniversary of the St. Lawrence Seaway, launching a three-year public information and promotion program to increase awareness of the system and its significance to the economy and the people of Ontario. A seaway anniversary logo was adopted as the international symbol. As well, the film "Inward Passage" promoting the marine system, was seen by approximately 50,000 visitors to Ontario Place.

Rail Services

An important development during the year was the initiation of a joint federal/provincial study of the transportation needs of northern Ontario communities now served by VIA Rail.

Staff attended CTC regulatory hearings on behalf of the province on the potential abandonment of CN's Meaford, Pagwa and Smiths Falls subdivisions.

As well, they attended hearings on the potential discontinuance of passenger service between Thunder Bay and Sioux Lookout and between Hearst and Nakina.

Rail office staff also continued investigation of acquiring abandoned rail corridors, either for MTC or other government agencies, to protect viable future corridors.

Communication

Staff made a number of significant representations before the CRTC in Ottawa on a host of telecommunications and cable/broadcast matters, including satellite utilization, Pay TV and local radio stations.

Policy positions were submitted to the federal Department of Communications on issues such as the national broadcast strategy, microwave licensing policy, broadcast distribution technologies and copyright reform.

As well, increased effort was undertaken in support of Ontario's communications industries through initiatives such as the development of a policy paper in support of the communications manufacturers and suppliers industries; production of a report on business opportunities for cable in the 1980's and 90's, and, implementation of a pilot project using Telidon technology in an aviation weather briefing system.

Research

Research and development was undertaken in a wide range of areas, focused on improving the highway system, with special emphasis on developing improved technologies for the repair and rehabilitation of pavements and bridges.

Pavement management system guidelines were prepared and distributed and research on the effects of truck weights and dimensions on pavement was undertaken.

A much-improved second edition of the Ontario Highway Bridge Design Code was published and structural office staff made a major contribution in preparing design criteria for transit structures, with emphasis on the GO-ALRT system.

Transportation technology and energy activities supported and promoted Ontario's transportation-related technology and energy research.

Major activities included technical expertise and assistance provided to UTDC to develop transportation systems for domestic and export markets and assistance in development of teleconferencing products and services.

Control and information systems staff conducted research in transport control and information systems with particular emphasis on the application of advanced technology, notably the use of fibre optics technology for freeway traffic management systems.

Trucks and Buses

A focus on safety and regulatory reform in the trucking industry resulted in the tabling of two major reports during the year. The Ontario Commission on Truck Safety, chaired by Dr. Robert Uffen, submitted its report in April of 1983. Sixty-one recommendations were made and action has been taken on over half of them in an effort to improve truck safety in the province.

And in June of 1983, the Public Commercial Vehicles Act Review Committee completed its task of developing new principles by which to regulate Ontario's trucking industry in its report, *Responsible Trucking*. It emphasized effective goods transportation and fair and equitable competition. The implementation of reforms is expected to take place over two years.

Drivers and Vehicles

The new Plate-to-Owner vehicle registration system, in place since December of 1982, demonstrated its advantages during the fiscal year 1983-84. These included staggered renewals keyed to the vehicle-owner's birth date, virtually eliminating once-a-year line-ups; quick replacement of vehicle permits by agents, and the more efficient updating and retrieval of information re vehicle permits and driver licences.

A major reorganization during the year was the relocation of production operations staff from Queen's Park and Downsview to Kingston in April of 1983, a move which was done expediently and with the least possible disruption in service.

Another service to the public was the provision of own-choice plates, allowing individuals to compose their own combinations of letters and numbers.

Supporting MTC's highway safety objectives, a broad range of activities were undertaken, including a preliminary evaluation of the probationary driver licence program which was found to have a positive impact on reducing violations and accidents among newly-licensed drivers; development of a new motorcycle operator's manual and changes to motorcyle licensing procedures in an effort to reduce accidents and injuries in this high-risk group; investigation and initial development of a photo driver licence delivery system, to be implemented in 1986; participation in devising strategies to deal with the problem of drinking drivers.

Highlighting changes to the HTA were: stop-arms required on all school buses; the second phase of the child restraint legislation; and off-road vehicle regulations.

Ministry contributions to Ontario's bicentennial celebrations included publication of *Footpaths to Freeways*, a mini-history of transportation in Ontario; the renaming of Highway 33 to the Loyalist Parkway and construction of a limestone and wrought iron gateway on Highway 33 just west of Collins Bay in honour of the arrival of the United Empire Loyalists; the creation of a Bicentennial mobile trailer show which operated out of some 25-30 Ontario fairs.

The following is a summary of expenditures reported by the financial comptroller for the fiscal year 1983-84, with comparative figures for the preceding year:

	Fiscal Year Ending	
	March 31, 1983	**March 31, 1984**
Ministry Administration	$ 39,014,427	$ 38,847,162
Policy Planning & Research	10,474,416	10,350,650
Safety & Regulation	66,997,237	78,372,494
Provincial Highways	540,186,767	516,228,314
Provincial Transit	97,554,400	103,748,919
Provincial Transportation	6,453,109	7,463,225
Municipal Roads	483,705,656	504,623,981
Municipal Transit	198,967,992	279,318,355
Communications	2,172,149	2,437,596
Total Gross Expenditure	$1,445,526,153	$1,541,390,696

Office
of the
Deputy
Minister

Affirmative Action Program

The Affirmative Action Program's mandate is to raise the level and diversify the occupational distribution of women in MTC.

AAP staff coordinated MTC's affirmative action plan and activities. Emphasis was placed on accelerated career development initiatives to increase the number of women qualified to compete for jobs in under-represented areas.

In these and other initiatives, staff worked with MTC managers who annually plan and report on their affirmative action initiatives.

1983-84 Affirmative Action accomplishments:

- — 77 developmental assignments completed under the accelerated career development program;
- — A Ministry Affirmative Action Incentive Fund approved by the Resources Management Committee; 22 developmental assignments initiated through this Fund;
- — Computer Application Training Program offered for four Ministry women to receive 6 — 8 months formal and on-the-job training to qualify them for systems-related positions;
- — Annual career development interviews with female staff conducted in most areas;
- — 144 career and work-related counselling sessions conducted with female staff;
- — Affirmative Action Coordinators established in all program areas. RMC approved defined roles and responsibilities to assist managers in coordinating their affirmative action commitments;
- — Regional visits to discuss affirmative action issues with managers and provide information sessions and career counselling for female staff;
- — Members of the Government Affirmative Action Council and task forces that addressed corporate policy issues such as day care, accelerated career development and the impact of technology in the workplace;
- — Affirmative Action Conference held for approximately 70 unit representatives and council members;
- — Technical assistance provided for the affirmative action network representatives in carrying out their roles and responsibilities;
- — Information on career planning and women's issues developed and distributed to female staff.

Internal Audit Branch

During the year branch staff made a positive change from the traditional role of audit. The old rule had emphasized the surprise audit and a detailed accountancy for financial matters; the new approach was more comprehensive: To identify and communicate areas of potential management weakness by reviewing current systems and processes. This won't eliminate financial, attest and compliance audits, but responsibility for the accuracy of the audit will belong to the manager. The knowledge that adequate management controls and systems are in place should reduce the need for the detailed audits previously conducted.

Engineering Systems Audit Office

Staff in five regional offices and head office addressed the requirements of the expanded role of audit by conducting six systems-oriented audits of both pre- and post-award engineering functions, remote airport facilities, engineering claims and utilities. As well, audits dealing with compliance and the value-for-money aspects of construction activities were initiated throughout the province. Three special investigations and studies were completed, in addition to 12 audits of contractors' records.

Senior staff provided and conducted in-house training programs for the development of audit staff and updated audit programs and methods.

Financial and Management Audit

Unit staff was responsible for conducting comprehensive audits within MTC, the Ministry of Northern Affairs and related crown agencies reporting to both ministers.

Audits concluded during the year were conducted in the Communications Division, Central Region, including Toronto (District 6) and Port Hope (District 7). In addition, a number of investigations were conducted in cooperation with the OPP. A few suspected or alleged irregularities were also investigated.

Major audits included the drivers system, a selection of driver examination centres and vehicle licensing offices throughout the province and a review of the ministry's Recoverable and Revenue System.

EDP Audit Office

Under the continued guidance of the long-term EDP audit plan, new computer systems were developed, old ones enhanced and reviews undertaken.

The status of the implementation of various task forces recommendations relating to the maintenance management system was reviewed. An interim report on the Operations Management Systems (OMS) was generated and a joint review on a special assignment was performed with operational audit on an internal control aspect of the driver's system. A post implementation review in data security involving the software package, Resource Access Control Facility (RACF) was initiated toward the end of the fiscal year. A follow-up to EDP audit's earlier review was undertaken on the Canadian Agreement on Vehicle Reciprocity (CAVR).

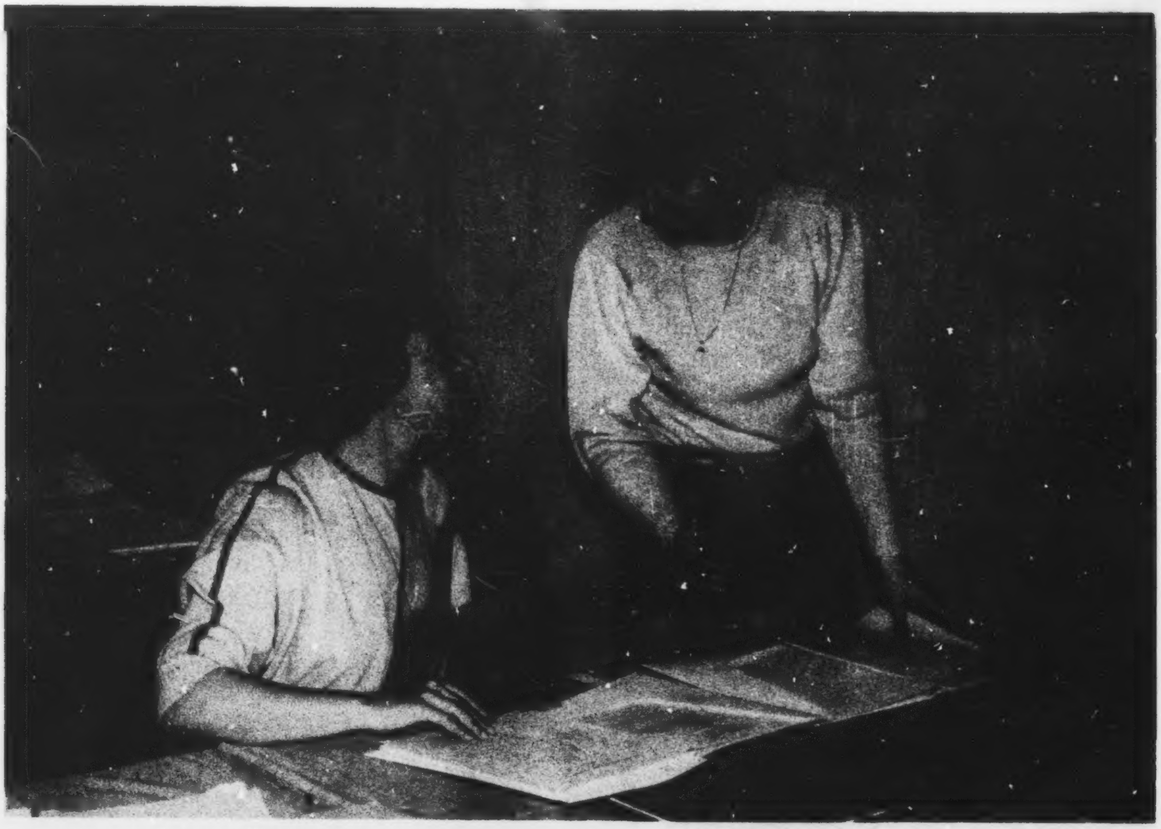
In addition, staff continued to review and comment on the development of new systems: Driver Study Research Project (DSRP), Workers Compensation Board (WCB); and the enhancement of the Direct Deposit System.

EDP Audit staff also provided technical support services to the Branch on an ongoing basis.

Quality Control Office

Office personnel responsibilities included audit methodology, "state of the art" awareness, staff development, planning and follow-up on audit recommendations. MTC staff have close liaison with the audit staff of other ministries, the Ontario Public Service Internal Audit Council, external consultants, the staff development section and such organizations as the Canadian Comprehensive Audit Foundation and the Civil Service Commission. Quality control staff reviewed reports to ensure they were complete, concise, constructive, objective, timely, fair, logical and easy to read.

Quality control staff conducted six in-house seminars on audit report writing and 30 auditors attended an "effective presentations" seminar.



Linda Hoffman (l) director of MIB with Marg Kelch, executive director, highway operations and maintenance at Senior Management Conference.

Strategic Policy Secretariat

Secretariat staff supported the deputy minister and Strategic Policy Committee (SPC) and its sub-committees to ensure the effective, ongoing operation of the ministry's strategic management process: to undertake corporate studies and assignments and provide information and advice on the current and future external environment.

It has two major functions. One is responsible for the basic operations of the strategic management process and the other is the outlooks office, responsible for monitoring the external environment for social, economic, political, and technological developments that may have future implications for provincial transportation and communications.

Policy Secretariat

Staff was involved in the management of th business of SPC, participated in SPC sub-committees, provided support to the resources management committee, and liaised with central agencies, other ministries, associations and the public in co-ordinating ministry responses and providing information and advice on a range of issues such as customer services, the bicentennial, regulatory reform and privatization.

Meetings were organized involving senior management and external delegations. As well, key steps in the process such as the SPC Think-In, Program Position and Prospects presentations and regional outlooks, and the annual senior management conference were organized and co-ordinated.

A new and revised "Strategic Directions 1984" publication was prepared to provide an overview of the ministry's strategic style of management and the strategies that have been formulated to deal with the outlooks and emerging issues affecting transportation and communications. Secretariat staff attended seminars and kept abreast of strategic planning developments in other agencies and were involved in a number of initiatives to improve and refine the strategic management process in the ministry.

Outlooks Office

The office developed the deputy minister's conference on public policy issues and a number of seminars and meetings with SPC and senior people from the public and private sectors on a variety of topics including high technology, economic development, deregulation and federal-provincial relations.

Presentations were made to SPC on a range of social and economic issues and scenarios, and the outlooks report was developed and used in formulating the strategic directions.

A ministry-wide policy on surveys of the public was developed and a system was initiated for co-ordinating program surveys, including the publication of an index of ministry surveys conducted over the past decade.

Terms of reference for increasing staff participation in the strategic planning process were developed and approval was given to pilot-test an approach. Consulting information and advice was provided to other MTC offices as well as to a number of Ontario government ministries, and outlooks liaised with planners and researchers in business, academia, and other agencies.

MTC safety display at Ontario Place.

Public and Safety Information Branch

Branch staff played an integral role in MTC's overall communications function, including liaison with the news media — radio, TV and print.

More than six million pieces of safety-related information materials were produced and distributed during the fiscal year, including brochures, pamphlets, booklets, posters and periodicals such as the Driver's Handbook and Motorcycle Driver's Manual.

Staff also produced safety curriculum materials for all Ontario public and separate schools and high school driver courses in secondary schools.

As well, branch personnel produced the Ontario Traffic Safety Bulletin; the monthly publications, MTC News, Working Together, an affirmative action newsletter and Responsible Trucking.

Information officers were also involved in the in-house production of radio and TV commercials; A/V scripts; display advertising for newspapers and magazines.

During the year, audio-visual staff produced two films and three commercials in addition to MTC's annual "Ontario on the Move' film.

Films included the 23-minute Trucksave Edge, a fuel economy promotion and Segmental Bridge — Spanning Twelve Mile Creek, which chronicled the first structure of this type built in Ontario. Staff also produced snowplow, Drivesave and drinking and driving commercials.

Section personnel maintained an audio-visual library of traffic safety films and video tapes for distribution to schools, police and the public.

The A/V section produced 34,000 black and white photographs, 46,000 colour slides and duplicates and 175 portraits.

Information officers researched and wrote 90 speeches for the minister, deputy minister and edited others for senior staff. Production of news releases, both general and contract, totalled 370.

Other responsibilities included the organization of offical functions for the minister, including news conferences, municipal airport openings and highway/freeway opening ceremonies.

Displays included MTC's annual CNE exhibit, a thermographic display at Ontario Place and displays at the Canadian Lakehead Exhibition, the Western Fair in London and Ottawa's Central Canada Exhibition.

MTC's safety caravan visited 16 Ontario communities during the spring, summer and fall of 1983.

During the year, information staff answered more than 140,000 telephone requests for up-to-date road information, 121,000 requests for general information and replied by mail to another 1,325 enquiries.

Management Improvement Branch

Branch staff continued to provide the focus for the ministry's initiatives in the identification and introduction of management and organizational improvements. Emphasis and activities remained at a high level to contend with the continuing challenges of managing in tight economic conditions and a changing environment. To this end the introduction of the voluntary retirement option was a specific item requiring particular consideration within the ministry.

Staff also extended their efforts in providing consultative service and assistance to managers throughout the ministry.

Activities during the year are highlighted below:

As follow-up to the recommendations made in the branch's review of the ministry's Internal Audit Branch, staff participated in the orderly transfer and integration of reassigned line functions to their respective head office or regional offices.

A comprehensive review of the Management Employee Group was completed and recommendations covering its continued existence, objectives, organization and general administration were accepted by senior management. Several have been implemented and plans have been initiated for the remainder.

A major study was initiated to review the ministry's regional and district financial administrative process. Within this review, current and developing business practices regarding system automation, inter-faces, etc., were to be identified and their potential application evaluated.

In consideration of the changes occurring in the ministry's programs and their operations, the deputy minister requested review of the supply and services component. The objective was to ensure that the products and services provided by this support element continued to be appropriately aligned to present and anticipated conditions.

A review of the ministry's overall publishing process and its organizational arrangements was undertaken and recommendations developed for consideration by senior management.

A task force recommended an implementation plan for two incentive award programs in the ministry. The VIP program (valuable individual performer) and IDEA$ program were designed to encourage and provide recognition for excellence in work performance, innovation and creativity.

At the request of the deputy minister of Northern Affairs, staff reviewed the organization of financial and administrative services in its two regions and made recommendations for consolidating and strengthening the functions.

As a result of a review of the ministry's management processes (in relation to the management standards project), this branch began work on developing a plan of improvement for operational planning.

Office of Legal Services

This office provides legal services to the minister and MTC staff. Legal officers are members of the Ministry of the Attorney General's staff seconded to MTC and located at head office and in each of the regions except Thunder Bay.

Staff provide legal advice on all aspects of the ministry's programs and prepare legal documentation through which such programs are carried out, e.g. ministry contracts, claims, property acquisitions and disposals.

The office advices on legislation affecting the ministry and prepares and recommends amendments to the statutes administered by MTC.

Legal office counsel provide ministry representations before administrative boards and tribunals with which MTC comes in contact and conducts prosecutions for offences under the Ministry's statutes, e.g. The Highway Traffic Act and Public Vehicles Act.

Claims Office

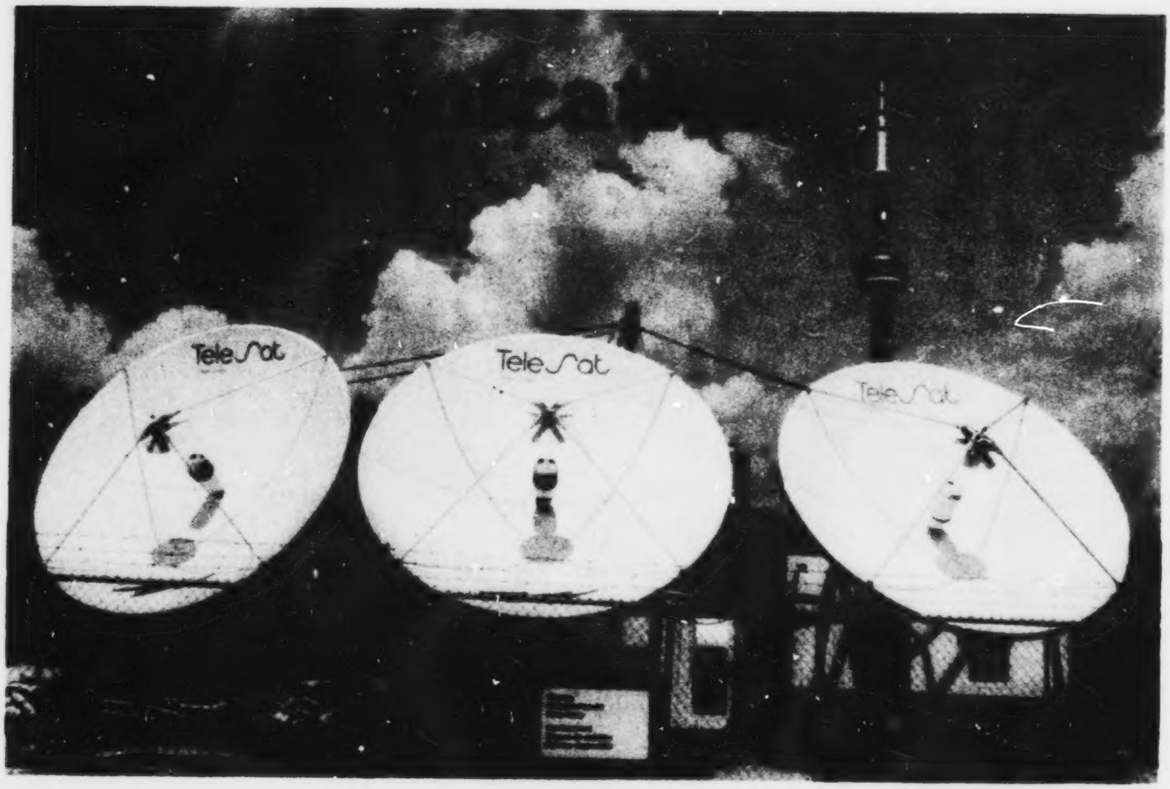
Staff initiates claims on behalf of MTC against third parties for damage to Crown property arising from accidents on the King's Highway; investigates and resolves, frequently by negotiation, claims made against MTC (and, in some cases, the provincial government) arising from a variety of circumstances, such as:

- accidents involving provincial government vehicles
- accidents resulting in injuries to government employees, while on duty by the action of a third party
- accidents arising from alleged lack of maintenance to the King's Highway
- accidents or emergencies on the King's Highway necessitating the presence of municipal fire departments
- accidents or damages to third parties as a result of highway construction work
- damage or flooding to third party property arising from alleged improper drainage
- depletion of rural well water supplies or pollution of wells allegedly from highway construction work, winter road maintenance or sand/salt storage facilities
- damage to private residences allegedly attributed to vibration from construction work or dynamite blasting
- crop damage claims said to have been caused by weed spraying operations
- spraying of automobiles or private property during mulching operations or highway zone-stripe painting and
- claims arising from incorrect computer information emanating from the Drivers and Vehicles Branch.

The handling of such claims entailed obtaining detailed reports from regional and district offices, from police, where applicable and field investigations where necessary.

With regard to accidents involving provincial government vehicles, the staff handled such matters not only for MTC but the entire Ontario Government with the exception of the Ontario Provincial Police.

Staff instituted claims against the public for damage to Crown property such as bridges, light standards, guide rails, etc., and where necessary, arranged for legal action to be taken against responsible parties through the Ministry of the Attorney General.



The activities of this division addressed the main objectives of ensuring that users of communications services have access to a reasonable choice of services at fair prices; promoted efficiency and effectiveness in the communications network and contributed to Ontario's economic growth through the development and use of the communications network.

Staff representations were made to the federal regulatory body, the Canadian Radio-television and Telecommunications Commission on the following issues:

- Teleset rate application for 14/12 GHz, representing a new range of telecommunications services;
- Policy involved in the provision of enhanced services through the use of common carrier facilities;
- Master Antenna Television Systems (MATV) calling for deregulation of MATV;
- Introduction of new TV specialty services;
- Canadian content regulation promoting new audience-based approach to regulating Canadian content on TV; and,
- Pay TV regulation promoting a market competitive approach to this new industry.

Policy positions were submitted to the federal Department of Communications (DOC) concerning the following issues:

- Federal Bill C-20, an omnibus Communications Bill which will amend the Bell Canada Reorganization Act, the CRTC Act, the Broadcasting Act and the Canadian Film Development Corporation Act;
- FM Radio policy promoting reduced regulation of private FM radio;
- Radio broadcasting in Canada wherein Ontario proposed means of maintaining the local character and commercial viability of radio despite increasing competition and new technologies;
- Direct broadcast satellite forwarding results of a major study of the potential of DBS and method of service delivery;
- Microwave licensing policy commenting on the licensing of private microwave systems;
- Responding to DOC's national broadcast strategy which incorporated many of Ontario's views;
- Promotion of new broadcast distribution technologies and successfully getting DOC to call for applications for multi-point distribution systems to deliver pay-TV services in non-cable areas;
- Provided comments on the introduction of cellular mobile services; and,
- Copyright reform in relation to cable and satellite transmission of broadcast signals.

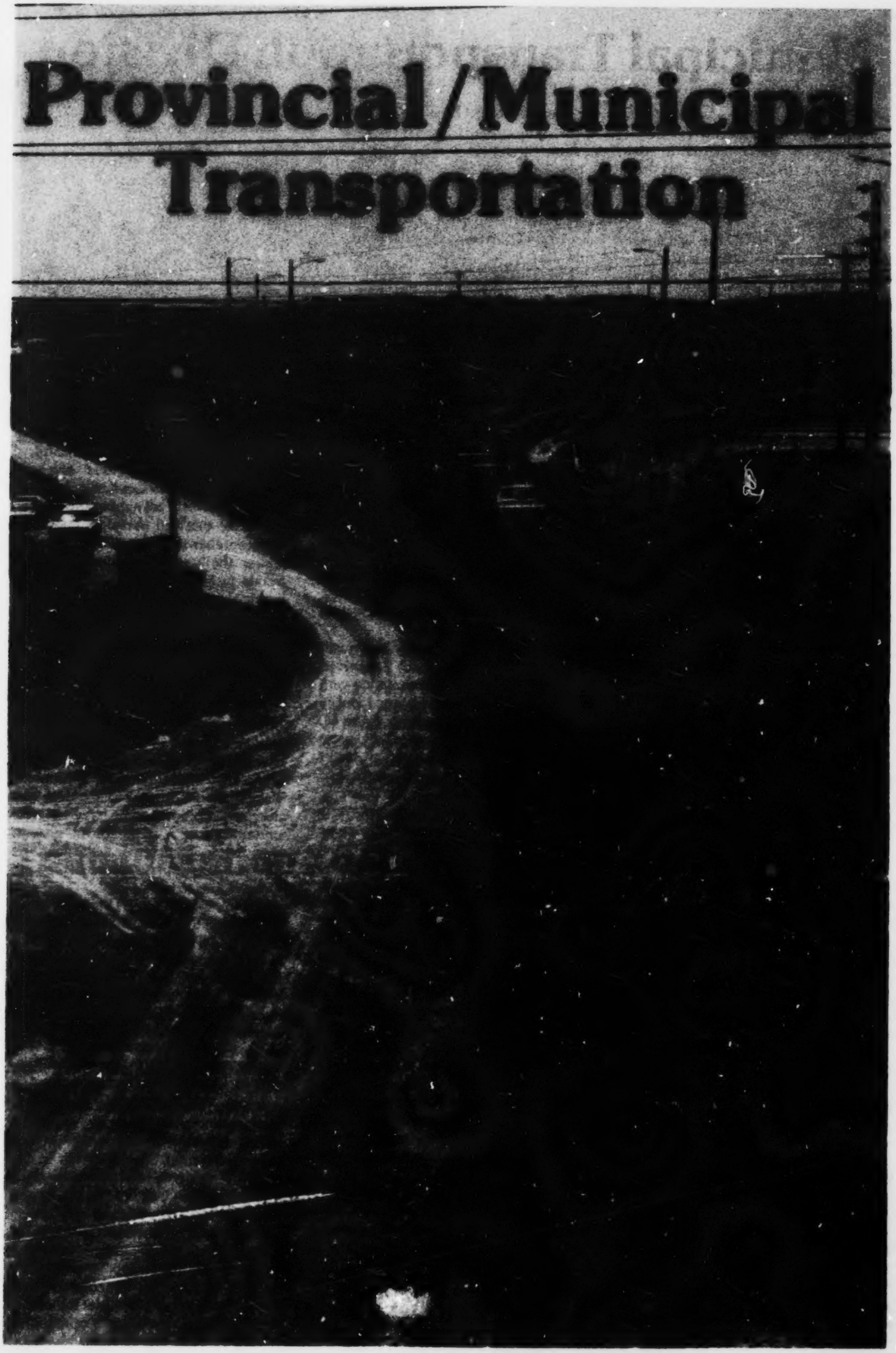
Increased effort was undertaken in support of Ontario's communications industries and during the past fiscal year the following activities were pursued:

- Development of a policy paper as a basis for support of the communications manufacturers and suppliers industries;
- Development of a statistical information matrix to monitor industrial performance in the communications sector;
- contact with several companies to identify opportunities for support and assistance;
- Initiation of a campaign to increase the awareness of the cable industry, the federal government and the public on the capability of cable to provide network services; and,
- Production of a report on business opportunities for cable in the 1980's and 1990's.

Other major initiatives included:

- Finalizing of an amendment to the Telephone Act which was passed by the Legislature in December 1983;
- Implementation of a pilot project employing Telidon technology in an aviation weather briefing system;
- Continuing coordination of the Ontario government's requirements for the mobile satellite experimental project;
- Provision of emergency diesel generator replacements in Fort Severn to provide power for telecommunications in remote northern Ontario;
- Promotion of the development of a fibre optic broadband local area network;

Provincial/Municipal Transportation



Municipal Transportation Division

Staff managed the ministry's municipal transfer payment programs which assisted municipalities in the development and operation of their transit systems and construction, rehabilitation and maintenance of their road systems.

Personnel also provided guidance and expertise to municipal authorities in identifying their transit and road needs and developed a fair and equitable distribution of the subsidy funds made available by the legislature. They also carried out verification procedures to ensure that legislative and policy requirements were met.

The division was supported in the managing and monitoring of the ministry's municipal roads subsidy program by the staff of the regions and districts.

Municipal Roads Office

Staff of the municipal roads office were responsible for program planning, policy development and evaluation and the overall administration of all municipal road subsidy programs.

Municipal Roads Programs

During the 1983-84 fiscal year, road grants were provided to 843 municipalities and 40 Indian reserves under the Public Transportation and Highway Improvement Act.

In support of the province's energy conservation program, funds were also provided to Metro Toronto, the regions of Durham, Peel and Waterloo and to cities of Brantford and Mississauga for development and implementation of computerized traffic signal systems to improve the traffic flow. In addition, 41 municipalities received subsidy for the installation of traffic signals.

Funds were provided, under agreement, toward the operating deficits of seven municipal ferry services.

The distribution is shown below:

Highway Connecting Link Program

There were 896 km of municipal roads covered by connecting link agreements. MTC funded 108 agreements with a total expenditure of $19,419,685. An additional $2,094,436 was spent on maintenance activities in towns, villages and townships.

Development Road Program

Development road work are municipal projects which would ordinarily place a financial burden on municipalities. MTC subsidizes these projects under agreements with each municipality up to 100 per cent of the total cost.

These roads remain under the jurisdiction of the municipalities with work done either on a day labor basis or by contract. There were 20 projects during the year resulting in an expenditure of $5,382,137.

Transit Office

Staff were responsible for transit program policy development and evaluation, administration of municipal transit financial assistance programs, development and management of operational improvement and demonstration projects, and carrying out or assisting in planning for municipal and provincial transit system improvements.

A total of 69 municipalities with municipal transit service received financial assistance in accordance with the transit operating assistance policy which provided a subsidy to cover 50 per cent of the theoretical net cost calculated on the basis of a target revenue/cost (R/C) ratio established for each municipality.

Also, additional subsidy up to a limiting amount was provided to those municipalities falling short of their target R/C ratio. Municipalities experiencing an above-normal population growth also received additional subsidy.

As well, municipalities introducing a new major rapid transit facility, were eligible to receive special subsidy for the initial years of operation. Agreements were developed for such undertakings on an individual basis, incorporating municipal initiatives related to coordinated land use, transportation policies, and detailing the operating subsidy terms.

Capital funds were also provided to municipalities at the rate of 75 per cent of expenditures associated with the acquisition of surface capital items and rapid transit construction.

Construction on the 7.2 km intermediate capacity transit system (ICTS) along the Scarborouogh corridor began in 1982. The system used new transit technology developed by UTDC. It will run from Kennedy-Eglinton subway station northerly to Scarborough Town Centre terminal with four stations between.

A small section of the region of Ottawa-Carleton exclusive busway was opened. A significant portion should be operational in 1984 with a total of 86 lane km and 26 stations completed by 1990.

The TTC Malvern 250-bus satellite garage was opened at a total cost of $14.3 million. This facility will service the northeast area of Metro Toronto, resulting in a more efficient system for fleet maintenance and storage.

The Hamilton Street Railway Mountain heavy maintenance facility was opened in 1983, accommodating 250 vehicles at a total cost of $13.8 million. The Sault Ste. Marie downtown bus terminal also opened and provided off-street parking for 14 buses. Total cost was $310 thousand.

A program to provide financial assistance to municipalities for the provision of transportation for physically disabled persons underwent a comprehensive review in order to assess the past and future program trends in service level, utilization and financial requirement, and identify the longer term issues surrounding the program. A new subsidy policy was developed for 1984 implementation to promote productive and cost-efficient services.

Financial and technical assistance to municipalities undertaking transit studies continued. Operational studies of existing transit services were completed in Kenora and Brampton. The Hamilton Transit Study, which was the most comprehensive review ever undertaken of a large transit system, was nearly completed with only the physical plan and the review of Canada Coach Lines to be finalized.

A joint Ontario Urban Transit Association (OUTA) MTC committee developed a set of "transit performance review guidelines" designed to assist the transit industry to evaluate their systems. The document was introduced to the industry at a seminar and several properties have started to use them.

The Ontario urban transit fact book, which provided a summary of the operating characteristics, and results measurements of Ontario's municipal transit systems was issued in an improved format.

The development and implementation of a computerized reservation, scheduling and dispatching system for transportation services of physically disabled persons in Metro Toronto was underway.

The province's articulated bus demonstration project was at the end of the first of three years' operational testing in Toronto, Ottawa, Hamilton

and Mississauga. Performance to date of the 53 coaches developed and manufactured by the diesel division of General Motors (Canada) Ltd. exhibited positive results.

For articulated bus routes in the Region of Ottawa-Carleton, a demonstration project to assess the feasibility of an "honor fare" system was underway.

The demonstration project to test the operational viability and performance of an articulated light rail vehicle (ALRV) developed by UTDC neared completion in Metro Toronto.

The transit information, communication and control system (TICCS) project to develop and implement computer-based products to satisfy the information, communications and control needs of transit properties proceeded, satisfactorily. The first year of work saw the documentation of requirements and specifications for most of the TICCS products and installation of several passenger information and vehicle radio communications packages.

Payment Verification Office

Office staff (formerly working out of the municipal audit section of the internal audit branch) were transferred to the municipal transportation division in January of 1983.

Personnel were engaged in the auditing of municipalities throughout the province, dealing with MTC subsidized road, transit and municipal airport expenditures.

This function was extended to cover specific programs concerning expressways, connecting links, development roads and special agreements.

During the fiscal year, audits were also carried out on behalf of the Ministry of Northern Affairs (MNA) in connection with their transfer payment program to municipalities and unincorporated areas.

Major project audits were performed on the expenditures incurred by the Urban Transportation Development Corporation (UTDC) and various consultants on behalf of the development of light rail transit technology and other transit related programs.

Transportation Technology and Energy Branch

TT&E staff actively supported and promoted Ontario's transportation-related technology and energy activities. For example, personnel provided technical expertise and assistance to the Urban Transportation Development Corporation (UTDC) to develop transportation systems for domestic and export markets. They also assisted in the development of teleconferencing products and services to allow for travel substitution.

Industry and Technology Office

Staff coordinated branch efforts in support of the ministry's contribution to economic growth in Ontario and Canada, particularly in the transportation sector.

Emphasis was placed on understanding transportation market demands and identifying opportunities for technology transfer into new products and services. ITO personnel sought new technological solutions to meet existing needs and enhanced the capability of Ontario's transportation-related industries.

Staff also established and maintained a network with public and private agencies responsible for market intelligence and international trade development. They coordinated a delegation from Saudi Arabia that came to examine Ontario's urban and rail transportation systems. Further to the minister's signing of a memorandum of understanding with Saudi Arabia, preparations were underway to assign technical advisors and take a transportation-related trade mission to that country.

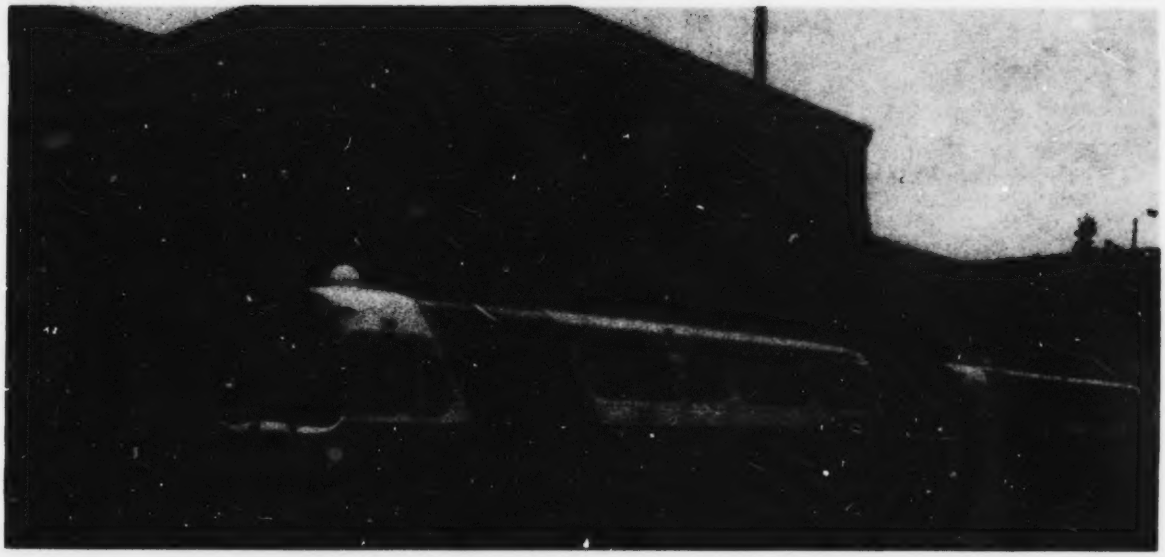
Human and Social Factors Office

This office provided research support and professional advice on social and behavioral issues to clients within MTC and other ministries. This has been extended to other Ontario agencies which deal with transportation and communications services in Ontario.

Staff continued development of a new driver education course for use in Ontario high schools. They were also responsible for evaluating the probationary licensing program and conducting an overview of driver improvement countermeasures. Other projects included the effectiveness of parallel noise barriers; the development of criteria for the evaluation of highway information systems; and a presentation to the Canadian Urban Transit Association on human factors of concern in transit operations.

Vehicle Systems Office

This office was responsible for research in the areas of urban transit, commercial vehicles, and automotive energy.



Urban Transit

Staff continued to work closely with the Toronto Transit Commission (TTC), Ontario Northland Railway (ONR), OC Transpo, and the private sector to improve the performance and cost-effectiveness of transportation systems. They provided technical expertise to GO-ALRT to assist in defining the vehicle and in choosing an optimum propulsion system. Staff also prepared a report for GO-ALRT on the merits of automating cleaning service and maintenance.

Staff participated with other ministry and government agencies in the rotary and floating frame truck programs and analysis was underway to determine the dynamic performance of both these trucks. Modified derivatives are being considered for GO-ALRT applications.

Assistance and technical expertise were given to:

- UTDC in the areas of LIM motors and the transporter project;
- the municipal transportation division in its implementation of the Scarborough ICTS project;
- the transit office and several Ontario transit properties in the testing and evaluation of articulated buses; and,
- the ONR and the Ministry of Northern Affairs in their assessment of the applicability of bi-level vehicles for use on northern routes.

Commercial Vehicle

Staff conducted extensive testing on truck tires, braking systems performance, modes of vehicle instability and computer simulation of heavy commercial vehicles.

Ongoing projects included development of a mobile truck tire dynamometer and road testing of three basic types of truck tires to compare their characteristics when subjected to the stresses of braking and turning on wet pavement. Staff also constructed a truck air brake simulator for experimentation and demonstration of component behaviour and overall brake system performance.

This group developed computer simulations and conducted tests to better understand the performance and handling characteristics of heavy truck train combinations for both engineering and safety purposes. A computer system was purchased and installed for automatic on-site data capture and processing.

Through RTAC and in association with NRC, University of Michigan and Transport Canada, the group prepared for the vehicle dynamics test portion of a major weights and dimensions program designed to standardize aspects of commercial vehicle legislation across Canada.

Automotive Energy

Through research done in cooperation with various universities and the private sector, this group continued to support TEMP's efforts to promote the utilization of propane, natural gas and methanol as alternatives to gasoline and diesel fuels. Research development and demonstrations were conducted on engines, conversion equipment, fuelling systems, fuels, oils and additives.

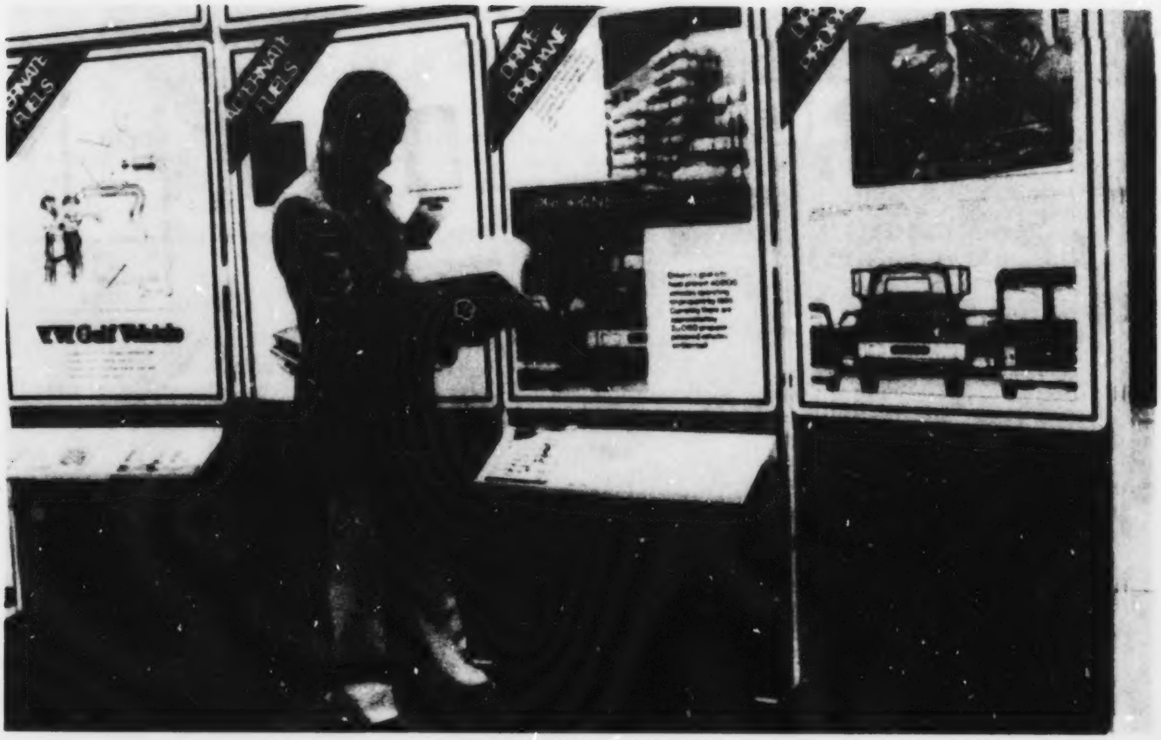
Projects included:

- Diesel substitution by propane pursued on two fronts. This group participated in the evaluation and acceptance testing of a propane bus at OC Transpo. A propane truck project with the Ontario Research Foundation continued with the conversion of a commercial diesel engine to propane fuel;
- Compressed natural gas (CNG) demonstrations by Consumers' Gas and Union Gas produced valuable operating data with vehicle fleets and fuelling stations operating under Ontario conditions. The University of Toronto and MTC completed a series of CNG conversion equipment evaluations with a Ford six-cylinder spark-ignition engine; and RMC identified a promising natural gas absorption media which could lead to the adoption of low-pressure CNG storage;
- The examination of methanol as a fuel substitute for gasoline continued. The MTC/Suncor/AGC methanol blend demonstration continued to show the acceptability of properly tailored methanol gasoline blends in MTC fleet vehicles. An MTC/Shell/Ford project identified some suitable straight methanol formulations for use in factory-modified vehicles. Work at RMC was in progress to examine the cold-starting performance of a methanol engine under controlled laboratory conditions.

Control and Information Systems Office

Staff supported and conducted research and development in transport control and information systems with particular emphasis on the application of advanced technology. During the past year, they were responsible for:

- Assessing and promoting the application of fibre optics communication technology for freeway traffic management (FTM) systems;



- Research and development of video pattern recognition, with emphasis on the development of a foreign object identification system for application on an automated rail transit system (GO-ALRT);
- Provided technical support in the control and communications areas to major ministry programs including GO-ALRT, the FTM projects on Highway 401, QEW.

Burlington Skyway and the Ottawa Queensway and the transit information communications and control systems (TICCS) project.

- A brief state-of-the-art review of the new field of artificial intelligence as it related to transportation systems and ministry operations.

Transportation Energy Management Program (TEMP)

The TEMP program, a joint venture with the Ministry of Energy, was engaged in reducing Ontario's dependence on petroleum fuels in transportation through initiatives in two main areas: development of alternative transportation fuels and the marketing of energy management measures.

Alternative Transportation Fuels

ATF staff conducted and co-ordinated an extensive program of research and demonstrations of alternatives to conventional oil-based transportation fuels. Following investigation of barriers facing the development and use of alternative fuels, the section was active in three main areas: basic research of the utilization properties of these fuels, the development of the technologies of fuels usage, and the demonstration of actual fuel use in vehicles.

Basic Research

- Research was done at Royal Military College in Kingston to improve the storage and refuelling of compressed natural gas.
- Conducted investigations into the cold start properties of methanol/gasoline fuel.
- Concluded research undertaken with Shell Canada into the components of an optimum fuel additive for methanol fuels.

Technology Development

- Concluded extensive testing and evaluation of propane and natural gas fuel systems.
- Converted a large diesel-type engine to operate on propane at the Ontario Research Foundation.
- Initiated a methanol heavy-engine development and testing program.
- Installed and evaluated a propane-powered transit bus engine in an OC Transpo bus.

Fuel Demonstrations and Testing

- Concluded a fleet demonstration of 22 natural gas powered vehicles at Consumers' Gas.
- Completed a demonstration of methanol/gasoline blended fuel, using 40 MTC fleet vehicles. This demonstration was conducted in cooperation with Sunoco and Alberta Gas Chemical Co.
- Carried out a demonstration of neat methanol fuel use in 16 vehicles with Ford and Shell Canada.
- Initiated a demonstration of propane fuelled bus operations at Ottawa-Carleton Transpo.

Marketing

Staff worked with industry, municipalities and the general public to disseminate information and promote adoption of fuel-saving measures, technologies and the use of available alternative fuels, through seven subprograms:

Drivesave: Conservation and energy efficiency measures were promoted to the general public and automobile fleets through seminars, displays and the distribution of information and promotion material. During this past year, over 2.5 million pieces of fuel economy information were distributed in Ontario.

Specific activities included a special seminar on propane vehicles, attended by 200 fleet managers, held in cooperation with "drive propane" and the National Association of Fleet Administrators.

In addition to this successful seminar for the fleet industry, drive propane ensured that its relationship with the Propane Gas Association of Canada continued to expand. Staff was involved with the development of a new propane vehicle inspection program, which will be administered by MTC.

A new film on truck driving techniques called "The Trucksave Edge" was produced "in- house" with assistance from industry and the trucksave fleet advisory committee. This film was shown across Canada and has been extremely well received.

The 1983 Fuel Economy Challenge was successful and industry donated over $10,000 in prizes.

A number of fleets and owner-operators were using trucksave fuel conservation techniques, such as those described in a new audio/visual presentation directed at mechanics, called "Maintenance for Fuel Economy."

The Share-A-Ride program promoted vanpooling and carpooling with the objectives of saving fuel and reducing road conjestion. Associated benefits of ridesharing included lower costs for employers through reduced parking demand and lower absenteeism. Individuals enjoyed the benefits of reduced commuting costs and release from the stress of driving.

The program was responsible for the creation of 350 employer- and owner-operated vanpools and 650 carpools. An additional 1,100 carpools were attributed to the 35 carpool parking lots in the province.

An estimated 33 per cent of Ontario's fuel consumption occurred in transportation systems under municipal control or influence.

The municipal transportation energy management group worked closely with municipalities to provide technical assistance and educational material to ensure that municipalities were able to capitalize on opportunities to save fuel. Staff continued the distribution of a quarterly newsletter. Over 400 copies of the transportation energy analysis manual were also distributed to Ontario municipalities with a population of 5,000 or more.

More than 100 fleet operators took advantage of a municipal driver training program made available by this office in the form of a 16 mm film and 35 mm slide presentation.

Government FleetSave: A reporting, coordinating and monitoring structure was formed, involving energy coordinators from all government ministries and agencies, to make available information on transportation energy management.

To promote increased use of teleconferencing more than 5,000 brochures and reports were distributed and 10 articles published, internationally. Presentations and training sessions were attended by over 600 people. Organizations using teleconferencing reported as much as 30 per cent of travel had been replaced and the level of satisfaction was high. Teleconference 83, a two-day symposium sponsored by TEMP was attended by over 250 people from industry, government, health and education.

Technology Services Office

Staff provided support to other offices in the branch, the ministry and private sector for transportation-related research and the publishing of research results.

Experimental Testing Group

This group provided quality testing facilities including research and large-scale test laboratories, a mobile research laboratory and a commercial vehicle testing facility, unique in Canada. It included a digitally-controlled chassis dynamometer designed to test light-vehicle exhaust emissions, fuel economy and alternative fuels.

In addition to vehicle testing, bridges were instrumented on behalf of the structural research group and the data collected, recorded, digitized and submitted for analysis. A GO bi-level car was tested for ride comfort on the Ontario Northland Railway, to assist ONR in specifications for their own new bi-level cars.

Technical Publishing Group

Personnel provided editorial, graphics and word processing services, and was responsible for a variety of published items ranging from bumper stickers to newsletters, to research reports. Over 150 items were published, including the two-volume set of the Ontario Highway Bridge Design Code, the first of its type in North America. Text extracted from the bridge code, and information transmitted by computer from Seattle, was used to prepare design criteria for the building of GO-ALRT guideways.

Staff also coordinated the production of displays and pamphlets for TEMP and assisted in the production of a new film, The Trucksave Edge.

Policy Planning Branch

Over the year, the staff of the four offices have become fully established in their respective roles in support of the MTC policy development process. The following is a summary of the achievements and specific activities which also serves to illustrate the linkages between the Branch's function and various sectors and interests both within and outside the ministry.

Intercity Transportation Policy Office

Personnel worked to strengthen the ministry's position in matters of intercity passenger transportation by proposing policy direction through policy research and analysis and by assisting the suppliers and users of the transportation system in Ontario. These efforts focussed on:

- The development of a provincial public transportation policy which addresses the best interests of the carrier companies and the travelling public;
- Organizing a task force to recommend policy direction on automobile use and the ministry's relationship with the auto industry;
- Completing the processing and analysis of a multi-modal passenger survey to provide travel information for policy development and marketing initiatives;
- Policy analysis projects in northern mobility, rural route abandonment, nuclear emergency evacuation planning and support for the carrier industry;
- Liaison with industry and municipal participants at potential intermodal terminal locations; and,
- Publication and distribution of the first edition of the Ontario Intercity Guide to Public Transportation.

Goods Distribution Systems Office

During the last year, staff developed specific activities in line with current strategic directions and supported the achievements of ministry objectives.

Directed toward improving the effectiveness and efficiency of the goods transportation/distribution system and thus support productivity improvement in the manufacturing and service sectors, the five major program elements

- Provided advisory service to small Ontario export oriented shippers to resolve their transportation/distribution problems;
- Explored opportunities to expand Ontario's role as a North American transportation hub for international goods movements;
- Promoted the establishment of a comprehensive, computerized transportation pricing/routing/service data information system for Ontario/Canadian shippers and carriers;
- Promoted Ontario interests related to federal legislative changes, e.g. Crow; and,
- Interacted with modal offices to formulate policy related to intermodal issues.

Transportation Demand Forecasting Office

Staff made concerted efforts with other ministry offices and municipalities to accomplish the following activities:

- Promoted the application of more transparent and flexible transportation demand forecasting techniques by sponsoring training courses for staff and workshops and seminars for municipalities;
- Developed long-range demand forecasts for GO ALRT based on different scenarios;
- Conducted a province-wide commercial vehicle survey on highways;
- Updated highway demand forecasts for four of the five planning regions; and
- Recommended a number of initiatives to increase the efficiency of data collection and management.

Urban Transportation Policy Office

During the past fiscal year, staff successfully shaped and supported the following significant achievements:

- Met the strategic ministry requirements in other major urban areas of the province outside the Greater Toronto Area by completing an overview of 10 cities and regions. This overview covered growth trends, identified transportation problems, issues and opportunities and developed strategies for improvement and/or capturing the potential values of the transportation opportunities;
- Completed a position paper and an implementation plan for the co-ordination of the 13 transit operating agencies in the Greater Toronto Area;
- Supported and maintained closer liaison with Metro Toronto and the Regions of Durham, York, Peel, Halton and Hamilton-Wentworth staff in the development of growth trends and the identification of potential policy issues;
- Completed strategy review of Toronto central waterfront transportation requirements and multi-modal terminals for the Greater Toronto Area; and,
- Supported the co-ordination and preparation of the strategic directions for the ministry's municipal transportation program.

External Relations

MTC's wide range of contacts with transportation agencies of other governments and the transportation industry were coordinated through the office of the Coordinator of External Relations.

Staff assisted in development and administration of transportation policy and helped ensure such contacts reflect the views of the government.

Of major significance were attempts to achieve suitable recognition for provincially-operated commuter rail services and efforts to obtain a federal government commitment to establish a funding assistance program to replace the expiring Urban Transportation Assistance Program.

Other issues included obstruction zoning in the vicinity of airports and the federal domestic air carrier policy.

Rail Office

Staff was responsible for co-ordinating Ontario's interests in all rail-related activities, promoting and assisting in development of a suitable provincial rail transportation system for both passengers and freight. They were also involved in a large number of programs such as: branch line rationalization; review of the level and quality of passenger services; regulatory activities; freight issues; promotion of intermodal services and service development; and safety issues.

An important development was the initiation of a joint federal/provincial study of the transportation needs of communities presently served by VIA Rail in Northern Ontario. Sponsored by MTC and Transport Canada with MNA and VIA Rail, Manitoba also participated.

Staff attended CTC regulatory hearings on behalf of the government on the potential abandonment of CN's Meaford, Pagwa and Smiths Falls subdivisions. There were also a number of outstanding abandonment applications investigated, including CN's Marmora, Campbellford, Dunnville and Fergus subdivisions as well as CP's M&O subdivision.

Staff continued investigation of

acquiring abandoned rail corridors either for MTC, or other government agencies, to protect viable future corridors.

The rail plan was compiled to first draft stage prior to external consultation. This will involve the rationalization of branch lines and the analysis of corridor options.

Staff also attended CTC regulatory hearings on the potential discontinuance of passenger service between Thunder Bay and Sioux Lookout and between Hearst and Nakina.

Personnel were heavily involved in such other passenger-related issues as the continuing intensive work in the Quebec City/Windsor corridor. Extended and detailed discussions continued with VIA to encourage and shape the nature of possible corridor improvements to passenger rail services.

Ontario also participated in: a task force on commuter rail legislation; Thunder Bay rail issues task force; and the railway cost of capital study and submission.

Staff participated in a group of committees to define policy and implementation of projects affecting public transportation modes, including the rail, bus and intermodal committees. They also represented Ontario on VIA's regional advisory council.

Personnel continued to be involved in rail safety issues, transportation of dangerous goods, rail and road crossings, plus regulatory issues such as inter-switching limits, Section 279 of Railway Act and impact of the Staggers Act; CTC jurisdiction over private sidings; commuter and passenger rail legislation; freight rate issues; and, railway operations technology.

Air Office

Staff was responsible for policy and program development of air transportation in Ontario. The activities of the office were divided into three broad sub-groups: remote airport development; municipal airport assistance; and, air transportation influence.

The remote airport development program consisted of the development and maintenance of a system of public airports in remote areas of northern Ontario. Construction and maintenance of such was the responsibility of the ministry's Northwestern Region. Capital funding was through MNA and maintenance funding through MTC.

Air office staff was responsible for the development of policy and standards, preparation of multi-year programs and monitoring of current programs. The system now includes 19 operating airports with two more under construction.

Staff of the municipal airport assistance program assisted municipalities in developing and maintaining a system of airports to facilitate the movement of people and goods and support economic development. Presently, it covers the entire geographical area of the province.

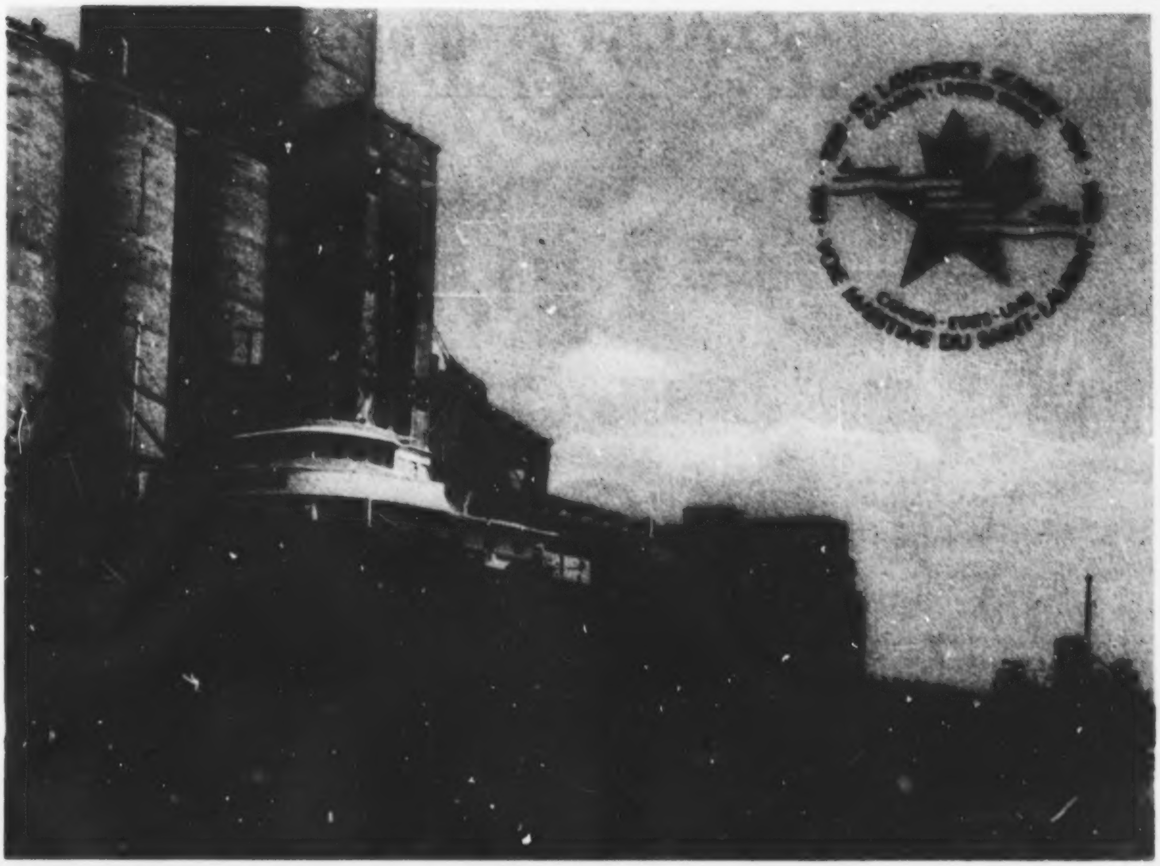
Staff also assisted municipalities in planning, designing and operation of their airports and entered into agreements with them for requested subsidies towards construction projects and maintenance expenditures. The subsidy program, supplemented by funds made available through BILD, was made available to 46 municipalities.

A major and ongoing staff function was the monitoring of the level of air passenger services in Ontario. This involved, in part, an assessment of air carriers' applications for new and improved air services submitted to the Canadian Transport Commission (CTC), the federal agency responsible for licensing and regulating commercial air service activities.

The Government of Ontario agreed to purchase two new de Havilland Dash 8 aircraft for use in the norOntair system.

The following special policy issues continued to be addressed during the past year:

- urged the federal government to resolve jurisdictional complexities related to airport zoning and airport land use development;
- to implement a public air navigational system in northern Ontario;
- to develop an air carrier policy which simplifies regulatory procedures, provides airline flexibility and encourages competition;
- encouraged the development of a distinctive air carrier for regional air services in Ontario;
- promoted Toronto as a gateway centre for international air passenger



and cargo services in order to enhance trade and tourist opportunities for Ontario; and,
- monitored and reacted to federal government initiatives with respect to airport licensing policies and airport regulations.

Personnel were involved in implementing the Ministry of Health's system of medical emergency heliports. The actual construction of each heliport was the responsibility of the hospital authority. They continued to develop standards and provide assistance and guidance related to site selection and licensing procedures.

Staff also initiated the development of an air system flight planner for Ontario — flight schedules of local and regional air carriers operating within Ontario listed in the Teleguide system. They also installed a computer terminal enabling them to access information related to airline schedules and other aviation related data. And they continued to issue the Ontario Airport Facilities map, intended to provide information to users as to the location of all significant Ontario airports and the facilities that exist at each location.

Marine and Pipeline Office

Staff maintained contacts with provincial, federal, private and international organizations. Appropriate policy advice was developed on issues related to marine transportation; issues related to pipeline bulk carrying opportunities as a transportation option were addressed.

Major programs and activities recommended in the January 1981 Great Lakes/Seaway Task Force Report were underway.

The Ontario ports study held six public meetings across the province. Interested agencies reviewed the preliminary findings of the study and additional input was invited. An inventory of all port facilities was documented.

Personnel undertook a leadership and coordination role in increasing public awareness of the Great Lakes/Seaway System and its significance to the economy and standard of living of the people of Ontario. A three to five-year public information and promotion program has developed for implementation in 1984 to coincide with the 25th Anniversary of the St. Lawrence Seawey. A Seaway anniversary logo was created and subsequently adopted as the international symbol for the anniversary.

Staff also coordinated activities with marine-related associations, industries and other jurisdictions to ensure a widespread anniversary program in Ontario.

A triple-screen, 35 mm film on the Great Lakes/Seaway System entitled "Inward Passage" shown at the Discovery Theatre, Ontario Place, was seen by approximately 50,000 people.

A commercial promotion study undertaken jointly with the Ontario International Corporation resulted in 20 recommendations. And to make trade development information more available to Ontario ports, activities were underway to simplify port costs, to produce an overall system brochure and develop a computerized transportation information system for the marine mode.

GO-ALRT Program

GO-ALRT

Ministry of Transportation and Communications

The GO-ALRT program was established by the Ontario Government to provide improved transit service to the municipal regions between Hamilton and Oshawa. With two tiers of routes totalling over 200 km, one on the lakeshore and a second running north from the lakeshore to connect with the Brampton/Mississauga City Centre area, Pearson International Airport, North York City Centre and Scarborough City Centre, the service will use transit technology being developed by UTDC. The program is a combined endeavour of MTC and GO Transit; ultimately the system operator will be GO Transit.

Approval for implementation was given to the first extension from Pickering to Oshawa, together with the initiation of planning studies to designate a right-of-way for the remainder of the routes in the overall system.

Route Sections

During 1983/84 route alignment and preliminary design studies were completed for the Pickering to Oshawa section, and the selected route was endorsed by the municipalities concerned. Detailed design is underway for several sub-sections, and construction on a 6.5 km "test-track" section started in the spring of 1984.

While the Oakville to Hamilton route was designated and endorsed by councils concerned in Oakville and Burlington, alternatives were still being considered for the route into Hamilton. Preliminary design was completed for almost all of the Oakville and Burlington projects, and detailed design initiated in 1983/84 on parts of them.

The designation of rights-of-way for a GO-ALRT route on the lakeshore between Oakville and Pickering, and the North Metro section were in the planning stages. A CN study of the existing railway system through downtown Toronto concluded that sufficient capacity could be added to the present GO Transit commuter rail service to accommodate ridership projections to the mid-nineties.

Operational Service Planning

Ridership studies completed by MTC's Policy Planning Branch during 1983/84 indicated a high level of use of the proposed GO-ALRT routes in the long term. Daily usage of some route sections was expected to be in the vicinity of 140,000 passengers per day in the next 35-40 years, with forecast loads of about 20,000 passengers in the peak direction of flow in the morning rush hour on the most heavily used sections.

Management for Implementation

Technical committees of officials drawn from the municipalities and other agencies (such as the railways) potentially affected in a major way by the program were established and actively involved in directing and contributing to the various studies, together with GO Transit, MTC and GO-ALRT officials.

A senior management team was put in place in 1983/84 to oversee the development of the program, drawn from MTC and GO Transit and supplemented by the resources of the private sector. This team directs Metro Canada Ltd. (UTDC's subsidiary for delivery of this type of program), consultants, suppliers and contractors.

Vehicle Technology

The original concept for the GO-ALRT vehicle was modified in 1983/84 to be more compatible with TTC's needs. The new rolling stock will consist of cars 36 metres long, permanently coupled together in the middle to form a "married pair" of two 18-metre sections with a walkway between them. They will feature 124 seats per car, a normal cruising speed of 120 km/h, with power supplied by an overhead wire. The vehicles will ride on "steerable" trucks to minimize squealing on curves, and the entire system will be controlled automatically by computers.

An electrification voltage study was completed and a 25,000-volt a.c. system selected for the power supply. Concept studies were initiated for the overhead power design, as were electro-magnetic interference studies for other transmission and communications facilities located in the vicinity of GO-ALRT routes.

Fixed Facilities

Development of design standards for the guideways and stations was started during the year. MTC's structural office completed a major study of alternative designs for the elevated sections of guideways, resulting in selection of three basic standard cross-sections to be applied as local circumstances dictate. A study determined that at-grade guideway sections should be constructed by conventional concrete ties-and-ballast, except in areas where the higher cost continuous concrete slab is justified.

Central Region

Construction

The twinning of the Burlington Skyway was begun with the award of the largest "dollar value" contract ever tendered by the ministry. It was for the construction of a bridge over the Burlington channel that will ultimately serve as the southbound lanes of the QEW. The structure will have a five-lane cross-section and be 2.2 kilometres in length. Four design options were included in the contract package with the selected design being structural steel on the approach spans and balanced cantilever cast-in-place segmental concrete construction on the main spans. Completion is anticipated in the fall of 1985 and approximately 30 per cent of the work was completed in 1983.

The widening and improving of the QEW in the Burlington/Hamilton corridor continued with the award of contracts at Highway 2 and Freeman Road.

Preliminary structure contracts for the widening of Highway 401, westerly from Highway 427 to Highway 403 and Highway 403, southerly from Highway 401, were completed, and contracts to finish this section were awarded which, when completed in the summer of 1985, will include a collector-distributor system on the Highway 401 westerly to the Highway 403 interchange.

Construction continued on Highway 406 in the St. Catharines area; Highway 410 in Brampton, and Highway 417 north of Rexdale Blvd. Highway 401 east of Toronto saw the completion of a new interchange at Whites Rd. and the improvement of the interchange at Thickson Rd.

A contract for the widening of Highway 135/15 from Highway 2 northerly to Taunton Rd. was awarded as was a contract in Peterborough from the Queensway to Highway 7B.

The ongoing bridge deck rehabilitation and resurfacing plan for the Toronto by-pass portion of Highway 401 as well as Highway 427 and QEW continued as did the construction of noise barriers along the freeways.

Engineering and Right-of-Way

A total of 41 projects were designed and cleared for contract advertising, covering all types of highway improvements.

Particular emphasis was placed on the design of major freeway projects including the completion of design of Highway 406 in the St. Catharines area, ongoing design of Highway 410 in the Brampton area and design completion of Highway 401/403 collector-distributor system between L.B. Pearson International Airport and Cawthra Rd. in Mississauga.

Designs were also completed for regional bridge deck rehabilitation and sound barrier construction.

Municipal

Staff was responsible for managing the municipal road programs, including overall budget control for the subsidy, King's Highway connecting link, and development road programs.

During the year, 115 municipalities and six Indian Reserves received regular subsidies under the Public Transportation and Highway Improvement Act.

Staff administered a connecting link program involving 40 construction projects with a provincial contribution of $4,348,161 and $367,006 for maintenance in towns and villages.

The development road program consisted of two projects with a provincial expenditure of $516,147.

In addition, office staff administered the 1983/84 municipal job creation program valued in excess of $3.3 million.

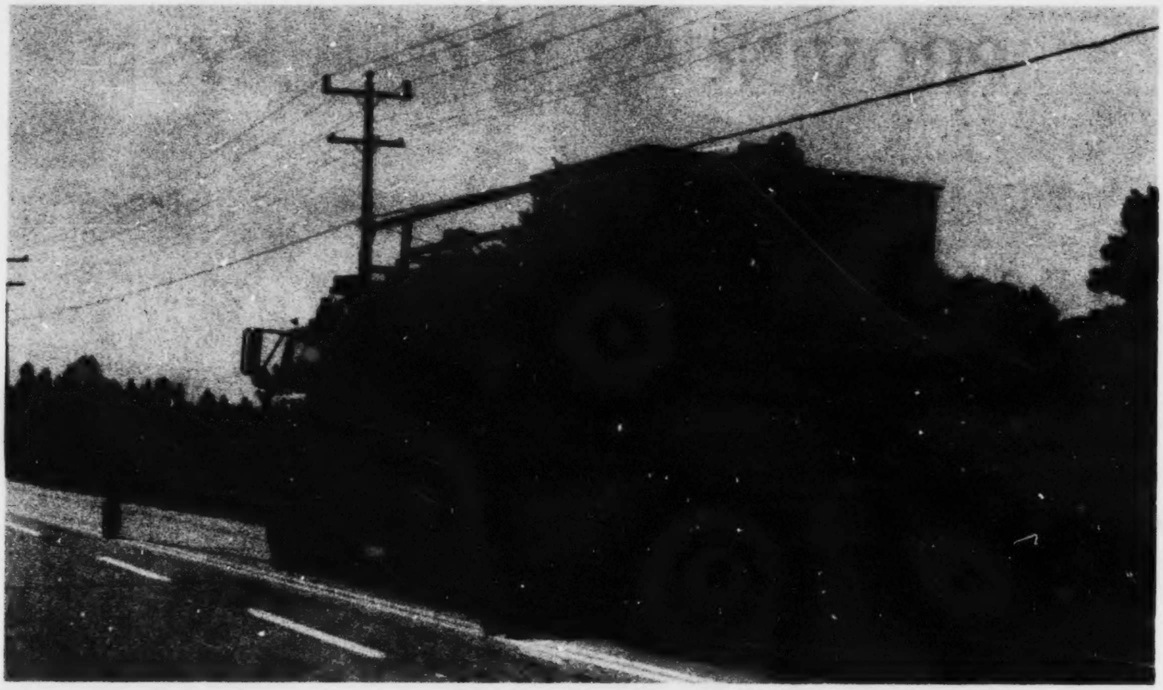
Maintenance

As of March 31, 1984, our highway network had grown by approximately 63 two-lane kilometres to a total of approximately 5,108.

Personnel carried out hot-mix patching in Hamilton, Toronto and Port Hope districts for a total of 50,344 tonnes.

In winter maintenance approximately 275,000 tonnes of sand and 151,000 tonnes of salt were used.

On Toronto district freeways, emergency patrols continued to operate, driving approximately 861,000 kilometres, providing assistance to 27,200 motorists, and dispensing a total of 9,660 litres of fuel.



Roads and Bridge Sections	Road Kilometres	Approved Expenditure	Subsidy Paid
1. Metro Toronto	732.6	49,019,800	22,939,300
2. Regions	3,550.6	75,729,700	42,737,100
3. Counties	1,463.5	12,656,100	9,198,400
4. Township and Indian Reserves	8,544.6	31,182,400	16,556,700
5. Urban Municipalities	15,931.8	229,804,900	98,463,200
Total	30,223.1	$398,392,900	$189,894,700

Drivers & Vehicles

Driver examination and driver improvement staff conducted 252,384 pre-test examinations and 187,970 road tests for driver's licence applicants. As well, 419,915 temporary driver's licences were issued. The driver improvement counsellors conducted 16,528 demerit point interviews, 142 medical hearings, 148 accident repeater interviews, and 102 medical waiver hearings which resulted in 968 driver's licence suspensions.

Licence issuing offices located in Toronto, Oshawa and Hamilton dealt with 388,616 transactions.

Vehicle inspection staff checked 24,871 commercial motor vehicles both at truck inspection stations and carrier terminals. Of these, 5,853 vehicles were detained, removed from service or tagged unfit. A total of 35,179 cars and light trucks were inspected at either permanent or portable lanes and 2,067 vehicles removed from service. Approximately 2,826 school purpose vehicles and 1,616 commercial buses were also inspected while 9,497 audits of motor vehicle inspection stations were conducted.

Eastern Region

Construction

Completion of two grading and granular base contracts on New Highway 16 from 2 km north of the Rideau River northerly 12.9 km prepared this section for paving to be carried out in 1984.

Resurfacing of the eastbound lane of Highway 401 from Highway 41 easterly 33.1 km to Highway 38 was completed in October, 1983.

Reconstruction of Highway 28 from 8.9 km west of Denbigh westerly 8.7 km was completed in October.

Reconstruction or resurfacing was carried out on Highways 2, 7, 17, 28, 31, 34, 62, 127, 138, 401, 417, 506, 507, 511 and 648.

Engineering and Right-of-Way

Seventeen capital construction projects were prepared for contract award in 1983. An additional 20 miscellaneous projects were also processed by office staff.

The recommended alignment for future Highway 416, resulting from the major study of the Highway 16 corridor, was endorsed by the Regional Municipality of Ottawa-Carleton (RMOC) Council and the ministry proceeded, with the submission to the Ministry of the Environment for approval under the Environmental Assessment Act.

A study of the Ottawa Queensway and St. Laurent Blvd. interchange was completed and a major redesign developed to compliment the Ottawa-Carleton Transitway construction. A joint (MTC/RMOC) study of a parallel street proposal between Rochester and Nicholas Streets on the Ottawa Queensway was well underway. And an Ottawa Queensway freeway management study was co-ordinated with the former and reached the conceptual approvals stage.

Maintenance

Major winter activities consisted of 1,566,857 kilometres of snowplowing, 108,574 tonnes of salt and 84,166 cubic metres of sand spreading.

Summer maintenance activities covered 4,388 kilometres of centre line and 4,001 kilometres of edge line painting. Some 11,676 trees and shrubs were planted, and 2,847 hectares of brush and weeds sprayed; 850 dead and dangerous trees were removed, and 23 hectares were seeded. Six traffic signal installations were erected and five updated. One overhead flasher was installed. Fourteen luminaires were also erected.

Two ferry services were operated, Glenora (with 19,798 trips transporting 261,344 vehicles) and Wolfe Island (with 6,595 trips transporting 322,099) vehicles).

The districts issued 641 building permits while 1,362 field advertising signs and 500 guide signs were processed.

Municipal

A total of $95,522,900 in subsidies were paid to regions, counties, townships, urban municipalities and Indian Reserves. In addition $2,940,113 was spent under connecting link agreements, and development roads received $1,874,022.

Provincial contributions were also made to: ferries — $885,421, and traffic signals — $348,200.

Drivers and Vehicles

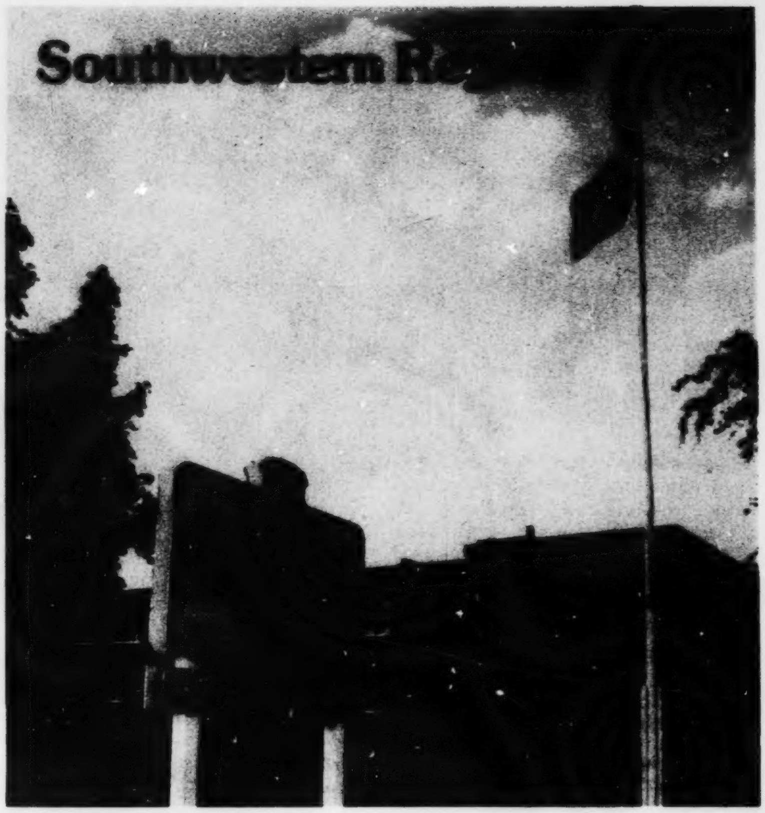
Through the fiscal year, driver examination staff conducted 94,841 pre-examinations and 46,102 road tests for driver licence applicants. Driver improvement counsellors held 3,192 demerit point interviews, 82 hearings and 28 accident repeaters.

Vehicle inspection staff performed 2,621 motor vehicle inspection station audits, inspected 5,044 commercial motor vehicles, 3,302 school buses and 293 other types of buses. Mini portable lane activities included the inspection of 3,068 vehicles of which 545 had serious defects.

Regional highway carrier personnel, despite continuing constraints, inspected 226,496 vehicles at truck inspection stations and designated area patrols.

Regional investigation and prosecution staff completed 45 compliance audits and 549 investigations of unlicensed trucking operations.

The conversion to a fully automated vehicle registration system caused, in the beginning, numerous complaints from the public because of technical difficulties during the first few months of operation. As the year progressed, MTC issuing offices and licence issuing agents became much more proficient in the use of the system and complaints reduced to a minimum. Both ministry offices situated in Kingston and Ottawa completed 169,985 transactions.



Construction

Major contracts awarded in Southwestern Region included 10.6 km of grading, four structures and a new patrol yard on Highway 403 between Brant County Road 25 and Oxford County Road No. 14; reconstruction of 3.0 km of Highway 11 which included a new interchange at Highway 169 and the installation of a median barrier.

Also, work continued on the widening of Highway 400 between Barrie and Waubaushene with the construction of a further 4.8 km of King's Highway plus two structures and service roads.

Resurfacing contracts were awarded on Highways 22 and 7 (19.0 km), Highway 2 (14.1 km), Highway 11 and Highway 88 (17.4 km). A further contract was awarded for resurfacing and widening on Highway 7 from Stratford easterly for 6.0 km.

In keeping with the ministry's program of structural maintenance, contracts were awarded for the replacement of the Black Creek structure in Oil Springs; rehabilitation of four structures on the Kitchener/Waterloo Expressway; three structures on Highway 19 at Vienna; the interchange structure at Highways 88 and 400; the interchange structure at Highways 77 and 401.

A contract was also awarded for the construction of a new weigh scale, building and truck inspection station to replace the existing station on Highway 401 in the vicinity of Putnam Road.

Municipal

A total of $126,221,780 in subsidies was paid to counties, regions, cities, towns, villages, townships and Indian Reserves in the region.

Approximately $5,560,000 was expended on 41 connecting link projects and $151,000 for a single development road project. In addition, $3,862,700 was provided to fund 52 job creation projects.

Maintenance

In addition to routine summer maintenance, staff replaced cable guide rail with steel beam guide rail at 10 interchanges along Highway 401; routing and sealing cracks in asphalt pavement was carried out extensively, three sand storage domes were erected and a new six-bay patrol garage was constructed at Warwich patrol yard.

The building retrofit program was continued with oil to gas conversions, infrared heating systems, insulated garage doors and upgrading insulation projects carried out.

An unusually heavy winter was experienced during the year with expenditures being approximately 20 per cent higher than normal, providing a good basis for our one-person operated plow trials.

Drivers and Vehicles

Staff conducted 73,579 road tests for driver's licence applicants, down 14 per cent from last year; and 107,982 pre-

examinations were conducted, a drop of 13 per cent. As well, 38,717 replacement driver's licences were issued. Driver improvement counsellors conducted 8,468 demerit point interviews.

Vehicle inspection staff performed safety inspections on 7,022 commercial motor vehicles both at truck inspection stations and carrier terminals. Also, 2,694 school-purpose vehicles were inspected, along with 676 commercial buses. A total of 5,981 cars and light trucks were inspected at mini-lanes. These inspections resulted in 650 vehicles having plates removed. Additionally, 5,937 audits of motor vehicle inspection stations were performed.

Staff inspected 869,061 commercial motor vehicles, resulting in 8,254 convictions.

As a new initiative, selected highway carrier officers concentrated their efforts toward public vehicles in a pilot bus surveillance/compliance program. As a result, 1,951 commercial buses were inspected, resulting in 51 convictions.

Northern Region

Construction

Major construction work continued on Hwy. 11, four-laning the Callander Bypass.

Construction also continued on Hwy. 144 new (Northwest Bypass), Hwy. 535, Hagar southerly and Hwy. 63 at North Bay easterly. Work was completed on Hwys. 549 at Whitefish; 69B at Parry Sound; Hwy. 66 Matachewan easterly; Hwy. 522 at Trout Creek westerly; and Hwy. 637 west of 69.

Paving and recycled paving was completed on Hwy. 101 at the Quebec boundary westerly; Hwy. 17 at Hwy. 108 easterly; Hwy. 17 at North Bay easterly; Hwy. 11 at North Bay northerly; Hwy. 11 at Latchford southerly; and paving continued on Hwy. 69 at French River, northerly.

Structure rehabilitation work was completed on Highways 11 (Hearst area 2 structures), Hwy. 11 West of Hwy. 631 (Pagwa), Hwy. 169 Bala and Hwy. 69 Moon River.

Structure work was completed on Hwys. 540, 17 and structure work continued on Hwy. 11 at Crooked Creek Bridge.

Construction was completed on the last two grading contracts, which complete the construction of the Detour Lake Access Road.

Maintenance

Summer work was carried out on some 5,750 km of King's secondary and tertiary highways. Two ferries were operated at Moosonee and Gardiner. In addition to routine maintenance operations, projects for gravelling, priming, surface treating, mulching, crack sealing and asphalt patching were completed.

Winter maintenance was carried out on most of this mileage while privatization of the garage operation repair area was continued. Snowplowing, using private plowing units, was increased to 18 plows. Two new patrol garages and a sand dome were built this year.

Municipal

During the year, staff administered various road assistance programs amounting to $41,500,000 to 132 organized municipalities (i.e. one county, two regions, three cities, 35 towns, seven villages, 81 townships, three improvement districts) plus 21 Indian Reserves. Also administered was $2,200,000 for 16 projects on highway connecting links, and another $2,600,000 for development road assistance.

In addition to the regular road assistance program, the BILD program provided job creation funding for another 67 projects which amounted to an additional subsidy of $5,100,000. To provide for maintenance and construction on local roads within the unincorporated areas, $3,850,000 was available to 112 local roads board, 11 statute labor boards and numerous special and specific projects.

Engineering and Right-of-Way Office

Staff completed contract plans and documents for a value of $35,000,000. Approximately 90 per cent was done in-house and 10 per cent by consultants.

They also carried out property acquisitions for the capital construction program and continued with legal, engineering and geotechnical field survey operations to facilitate the program. As well, they carried out environmental and corridor-control activities and provided input into the ministry's pavement management system.

Drivers and Vehicles

Staff, under the direction of the regional office, is divided into two districts: North Bay and Timmins. They served the provincial districts of Parry Sound and Nipissing; the district municipality of Muskoka; the provisional county of Haliburton; the districts of Timiskaming, Cochrane, Sudbury, Manitoulin Island; the regional municipality of Sudbury and the easterly portion of the district of Algoma.

A staff of 69 employees was responsible for driver examination, motor vehicle licence issuing, driver improvement counselling, vehicle inspection programs and enforcement of the Highway Traffic Act, Public Commercial Vehicles Act, the Public Vehicles Act and the Motor Vehicle Transport Act.

A staff of 25 driver examiners and clerical support conducted a total of 18,158 road tests and 39,956 pre-examination at nine driver examination centres and 19 travel-point locations.

One regional review officer responsible for driver improvement counselling, conducted a total of 1,199 interviews with drivers who had reached the nine demerit point level and conducted a total of 10 hearings.

A staff of 12 vehicle inspectors conducted 4,674 commercial vehicle inspections, 1,522 school purpose vehicle inspections, 107 inspections of church buses, transit buses, "physically disabled passenger vehicles," and highway buses.

They also conducted a total of 1,513 audits and investigations of licensed motor vehicle inspection stations, as well as operated portable mini safety inspection lanes which resulted in the inspection of 2,708 light trucks and cars.

A total of 612 vehicles were removed from service for safety-related defects. The audits, investigations and inspection of motor vehicle inspection stations, commercial vehicles and passenger and light truck vehicles, resulted in a total of 639 charges laid under the Highway Traffic Act.

Twenty highway carrier officers conducted a total of 109,662 inspections at five permanent truck inspection stations, four audit truck inspection stations and eight patrol areas. A total of 3,974 reports of suspected violations were completed, with 3,200 resulting in court action being taken.

One motor vehicle licence issuing office maintained by two ministry employees in North Bay, conducted 30,115 transactions.

The supervisor, motor vehicle licensing agents, conducted six site surveys. As well, two newly appointed agents and four new clerks were trained to operate vehicle registration system equipment.

Northwestern Region

Construction Office

During the past year, 23 projects were completed in this region. Of significance was the completion of the first stage of the Kenora By-pass, officially opened to traffic on Sept. 26, 1983, valued in excess of $10 million, the largest ever for northwestern region.

Work was completed in widening the Thunder Bay Expressway to four lanes from Oliver Rd. to Balsam St. The reconstruction of Highway 11/17, including paved shoulders, was completed between Thunder Bay and Kakabeka Falls.

The reconstruction/resurfacing of other sections of highways included Highway Nos. 11/17, 584, 599 and 17. Meanwhile, work started on the second stage of the Kenora By-pass as well as Highways 631, 527, 11/17, 582 and 628. Work also commenced in the construction of a structure spanning the English River on Highway 105 at Ear Falls, which, completed, will eliminate the need to utilize the hydro electric dam for traffic as has been the case for many years.

Maintenance

Routine summer and winter maintenance was carried out over 5,800 km of King's, secondary and tertiary highways. In addition, capital maintenance projects, including bridge and culvert repairs, prime and surface treatment and maintenance crushed gravel were undertaken.

Municipal

Some 70 municipalities and 11 Indian Reserves received regular subsidies amounting to $17.4 million. Staff undertook 11 connecting link projects at a cost of $1.3 million and two development road projects totalling $300,000. Some $2.9 million was provided to 116 local road boards, eight statute labour boards, 34 Indian Reserves (11 in the remote north), and other informally organized groups involved with public roads outside MTC's jurisdiction.

Engineering and Right-of-Way Office

Engineering and Right-of-Way staff completed all precontract engineering activities for $4.3 million work of capital construction. This work comprised 56.8 km of resurfacing-reconstruction and 124.1 km of grading and reconstruction. Also included were six structures. A number of miscellaneous projects ranging from load inspection sites to illumination of weigh scales were also completed. Contract preparation work was also undertaken for work on the district's minor capital and day labour programs, along with preliminary planning and precontract engineering activities for future programs.

Access Roads Office

Cost of summer and winter maintenance was shared with main user companies on 293 km of industrial roads and 69 km of tertiary roads. In addition, administration and control took place over 506 km of recoverable access road maintenance and four access road construction projects.

Remote Northern Transportation Office

Construction Program

New airports:
Kasabonika — 90 per cent completed;
Cat Lake — construction commenced; and,
Muskrat Dam — pre-engineering under way.
Projected total value: $450,000

Maintenance staff administered and controlled operation and maintenance of 19 remote airports at a fiscal cost of $2.4 million.

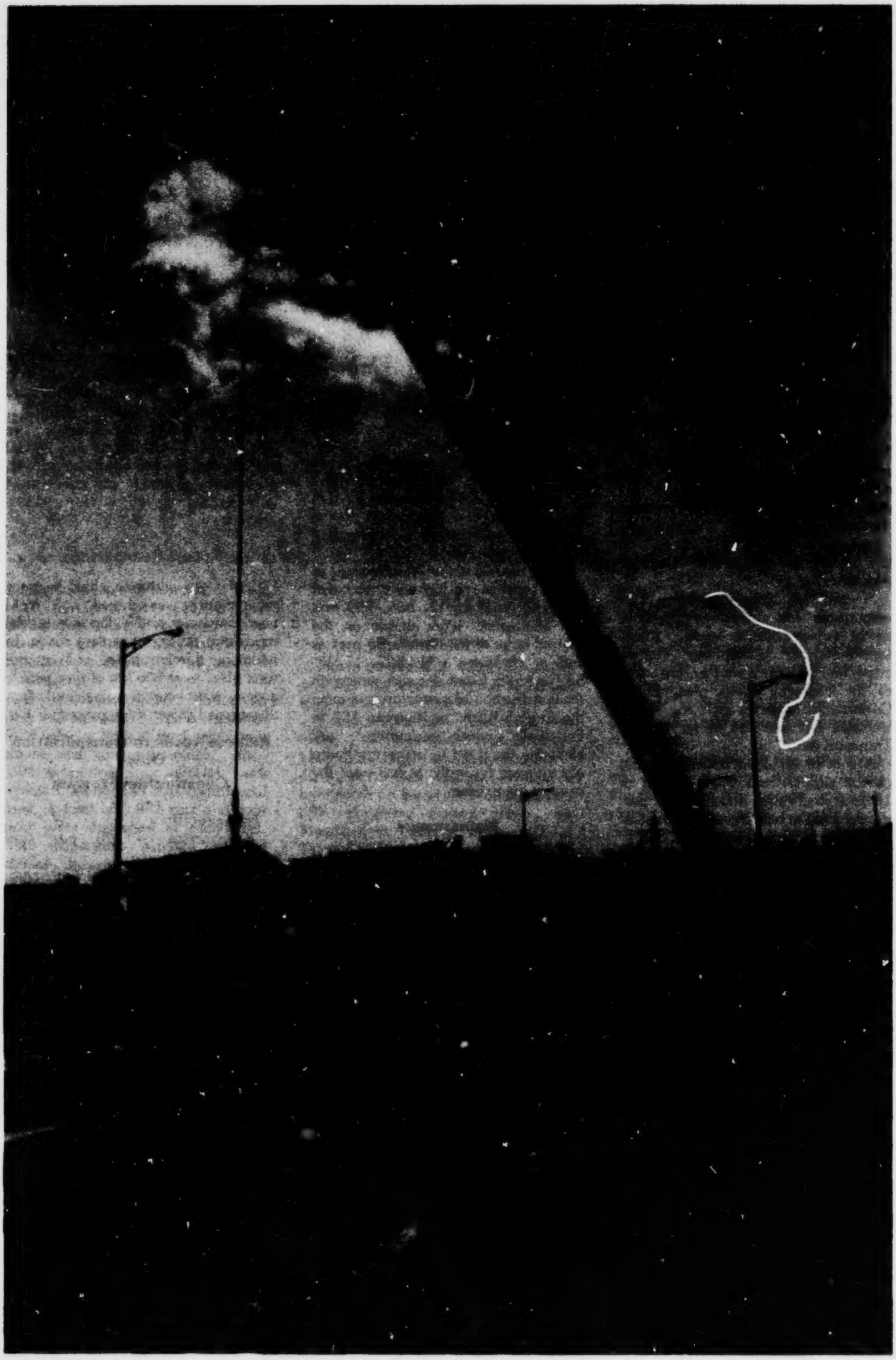
Staff administered and controlled the reserve roads program at 13 remote settlements at a cost of $100,000.

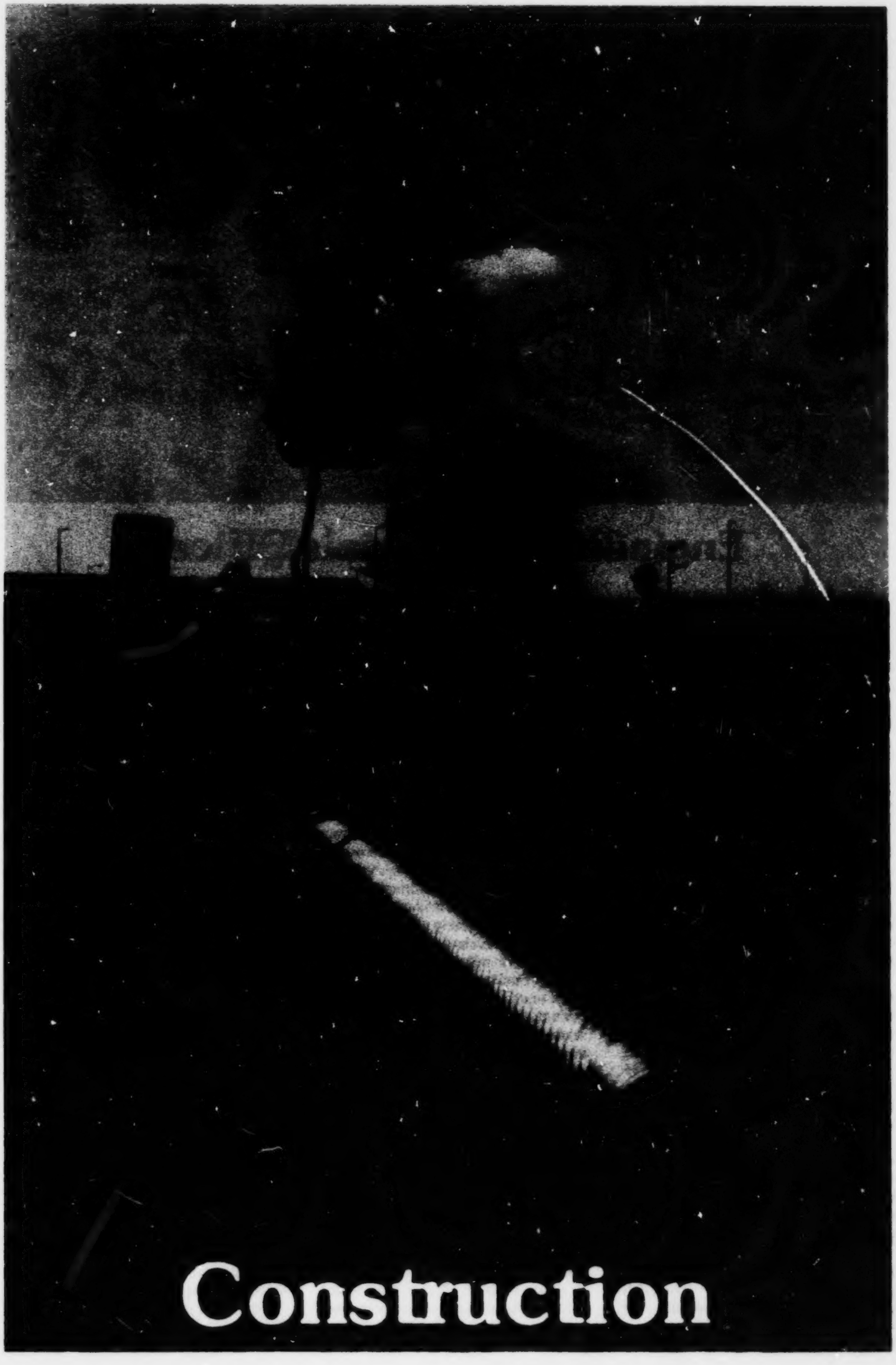
Drivers and Vehicles Office

Vehicle Inspection

Personnel completed 2,831 mechanical fitness inspections on commercial motor vehicles. In addition, 1,907 vehicles were checked at safety lanes held throughout the region. And 729 inspections were performed on school buses.

Highway carrier staff checked 73,900 commercial vehicles, resulting in 3,298 charges being laid.





Construction

Highway Engineering Division

Engineering Materials Office

Foundations Design Section

Foundation investigations were carried out and appropriate reports for foundations design and construction were prepared, for a total of 94 structure and earth/rock work projects. Of these, 50 were done by in-house staff, and 44 by geotechnical consultants working under direction.

In addition, 72 foundation reports for inclusion in construction contracts were also prepared. Preliminary and final foundation design drawings were reviewed for 88 projects scheduled for construction in the next two years.

Specialist advice and service was provided to MTC, municipal and certain other agencies on all aspects of foundations design and construction, including 32 MTC and municipal construction problems where site inspection by senior staff was necessary. Such projects included embankment and other earthwork failures, culvert and tunnel dewatering problems.

The foregoing includes 34 foundation investigations for the GO-ALRT system of which 30 were conducted by consultants working under staff direction and the remainder by in-house staff. Foundation feasibility studies also commenced on the Oakville-Hamilton and northern system projects.

Seven different instrumentation projects were monitored to determine settlements due to rock-fill compressibility and consolidation of compressible subsoil. Also, a new project was initiated to monitor earth pressures and vertical and lateral deflections of a structure abutment founded on compacted granular soil.

Bituminous Section

Development of performance specifications for hot-mix asphalt pavement construction continued to warrant high priority. After reviewing advanced systems in use by other highway authorities, extensive Ontario data was collected and used as a base for the development of a target quality assurance system. Fourteen contracts were selected for experimental evaluation of the draft system and further data collection during the 1984 construction season.

Detailed monitoring was initiated and continued to evaluate the performance of recycled mixes. Test data from several previous construction seasons was analyzed. Evaluation included continued work with emulsified rejuvenators, and the introduction of modifiers and softer asphalts than previously used.

Other priority work involved such initiatives as continued evaluation of pavement crack sealing materials and practices using updated techniques and equipment, revised instructions for waterproofing pavements on bridge decks and the utilization of steel slag fine aggregate in the construction of high-quality asphalt pavements.

Concrete Section

Staff continued to play a major role in the bridge rehabilitation sub-program.

The development and implementation of performance specifications for concrete was advanced by the transfer of the responsibility for concrete-mix design to contractors and arranging four trials where the contractor had the responsibility for the sampling of concrete, making of acceptance test specimens, curing of the specimens and transporting them to a designated ministry lab.

Testing of aggregates was continued to prevent the use of potentially alkali-reactive aggregates causing distress in concrete.

A policy was implemented requiring the use of CSA-certified private concrete laboratories for the testing of acceptance concrete cylinders in central, eastern and southwestern regions.

Chemicals Section

Staff reviewed, with regional and head office staff, the revised structural painting specifications (MTC form 911) and completed its "coatings descriptions" for inclusion in the guidelines for "coating of structural steel" currently being written.

A technical report was published on "accelerated methods of performance testing of traffic paint."

Soils and Aggregates Section

Extensive investigation revealed there are a fair number of concrete structures deteriorating due to the use of improper aggregates. To eliminate this situation, a systematic approach to the assessment of fine and coarse aggregates used in concrete was established to be followed by regional offices.

Physical requirements for the aggregates used in top quality bituminous surface courses were rationalized to be introduced in the new fiscal year.

Studies were completed (and reports issued) dealing with the issue of a mutually satisfactory location for acceptance sampling of aggregates. It was determined that samples taken during the construction of a properly-built stockpile were just as representative as those taken out of the stockpile or on the road.

Substantial progress was made on the computerization of the large amount of data in the mineral aggregate inventory.

Major updating of our petrographic analysis procedures was instituted.

Environmental Office

Staff was responsible for the development and coordination of natural and cultural environmental policy, procedures and guidelines for the ministry's programs and agencies.

During 1983-1984, interpretation and clarification relative to identified environmental assessment matters was provided to the regional planning and design sections, municipal office, air office, communications division, Toronto Area Transit Operating Authority, the GO-ALRT and Urban Transportation Development Corporation.

Work was completed associated with the modification of internal policies and procedures for the ministry's projects requiring individual approval pursuant to the Environmental Assessment Act, R.S.O. 1980.

Following an extensive review of existing environmental assessment class procedures, a new provincial highways program class environmental assessment document was prepared and submitted to the Minister of the Environment for approval.

Work continued on the preparation of technical guidelines and policy. The factors of noise and groundwater were incorporated into an environmental handbook for use in highway program areas. And staff provided expertise to internal ministry units and to external agencies.

Technical staff continued developing an environmental quality control program for the ministry. And they were involved in the training of construction and maintenance staff, the monitoring of contract packages, the inspection of construction and painting contracts, and the preparation of environmental specifications.

Highway Design Office

Staff of this re-organized office was responsible for six major areas of highway design policy: design development; design applications; highway standards; drainage and hydrology; design automation; and design evaluation and pavement.

Design development staff continued "as requested" reviews of current policies and prepared and issued a number of policy directives. Developmental work was continued on the tender analysis and payment system (formerly standard contract item code system).

Design applications staff prepared new and revised contents for the geometric design standards manual and the contract design, estimating and documentation manual; provided continuing expertise in geometric and detail contract design; participated in the development of the tender analysis and payment system; produced metric freeway interchange ramp templates; prepared new edge of pavement curve tables for intersections; and lectured at the municipal road design course.

Highway standards staff, besides maintaining up-to-date standard specifications and drawings for the design, construction, maintenance and safety of highways, issued the Ontario provincial standards. While not complete in every division, it's expected the ministry will dispense with its existing standards and use the new standards exclusively. These standards were the result of the cooperative effort of the Municipal Engineers Association, the Ministry of the Environment and MTC. Work on many standards was completed during the year, notably in the electrical area. Monitoring of regional developed special provisions and special design standards continued.

Drainage and hydrology staff issued the pavement drainage and storm sewer design chapter of the drainage manual and made good progress on five others. Several training workshops were presented to the regions. Improvements to two culvert design programs were completed with the cooperation of computer systems branch staff.

Design automation staff continued to provide direct support to users in the regions, municipalities and design consultants with respect to engineering systems application. Two formal computer applications training programs (Part II) were given in central and northern regions. The section produced a user's instruction manual for the "information network system" which will facilitate contract management information flow among regions and head office.

Also, a "standard item code" system user's guide was issued, completing the first stage in a contract management system which will eventually automate design cost estimates, tender documents, progress payments and on-line updating and retrieval from a centralized project data base.

Design automation staff produced a series of reports in the computer aided design and drafting (CADD) study, in anticipation of the introduction of interactive graphics systems in the road design process.

A separate CAD (design) phase was initiated in-house to develop a SYS 050/MOSS integrated road design system using inexpensive graphic terminals. For CAD (drafting), on the other hand, a submission was made to Management Board for funding of a vendor-supplied, interactive graphics system to be installed and monitored as a pilot test project to obtain data on productivity improvement before full ministry implementation.

Design evaluation and pavement staff took a leading role in the ministry's pavement management pilot study. Phase I report was accepted by senior management. A new mays meter trailer was fabricated in-house to meet the proposed ASTM specifications for this equipment. Pavement roughness measurements were conducted using the mays meter on 5,500 km of highways on 120 projects. Pavement skid measurements were carried out utilizing a brake force trailer at 248 sites on 2,387 km of highways. The number of tests were 14,300. Most of the pavement roughness and skid measurements were done at the request of the regions. A number of policy directives dealing with design and pavements were prepared and issued (approximately 155). Criteria for design projects were processed and approved.

Structural Office

The $38 million contract for the twinning of the Burlington Skyway was awarded during the year. Alternative designs for bidding were prepared in the structural office, and the successful bid was a mix of structural steel approach spans and segmental prestressed concrete main span. Staff was involved in shop drawing checking and approval on this project. The section completed studies for the rehabilitation of the existing Burlington Skyway structure and the preparation of contract documents.

The number of designs for new bridges dropped to 25, compared to 54 the previous year. Those designed by section staff remained much the same at 20, but the number completed by consultants represented only 20 per cent of the total compared to 65 the previous two years. Consultant work in structures shifted to the GO-ALRT project, and the structural staff reviewed consultant work on this project. In addition, the office participated in preparing the design criteria for GO-ALRT guideways and produced three basic design concepts which have been approved for their detailed design.

In the approvals section, the number of new municipal bridge designs that were checked increased to 186, from 137 the previous year. This included a major structure over the Hunt Club River (Regional Municipality of Ottawa-Carleton) costing $7.3 million for which alternative designs were prepared in steel and concrete. In the Heritage Bridge area, the stone arch Victoria Bridge in St. Marys was studied.

Staff also proceeded on a new Structural Inspection Manual.

The second edition of the Ontario Highway Bridge Design Code was published for use in bridge design and evaluation on ministry projects. Full implementation for municipal projects awaits the completion and testing of a modular computer system.

Surveys and Plans Office

Section staff continued to work on the establishment and evaluation of 730 horizontal control monuments on the Ontario coordinate system; 222 horizontal control stations were established for construction; 72 precise bench marks on geodetic datum were established and added to the vertical control system.

The legal documentation group examined 856 legal plans and 96 km of highway were designated as controlled access. The total is now 7,354 km. Staff training continued in surveying and drafting with four regional staff successfully passing qualifying exams.

The photogrammetry unit delivered 240 photogrammetric engineering plans and 15 cross-section projects as follows:

- Medium scale (1:2,000)
  13 plans in-house and one plan by private mapping firm for the GO-ALRT program.
- Large scale (1:500 or 1:1,000)
  127 plans in-house and 99 plans by private mapping firms of which 10 plans in-house and 65 plans by private mapping firms were for the GO-ALRT program.
- 12 cross-section projects were also completed in-house and three projects by private firms of which two projects were for the GO-ALRT program.

The remote sensing unit continued work on new policies and procedures. Work on the project entitled "surveillance by remote sensing of the environmental effects of building a new highway facility" was well advanced. Two reports related to this project were issued during the year. In addition, the final report on developing remote sensing criteria for estimating boulder deposits was submitted by the consultant.

Staff also provided aerial photographic mosaics and image library services to the ministry and others; 2,566 M² of mosaics and related products were produced and 1,509 requests for image library services processed.

Cartography section staff produced three maps which now are in public distribution: the official road map, bicentennial edition; the Ontario Intercity Guide to Public Transportation; and the first of the new Ontario Transportation Map Series — Map #1 southwestern Ontario. Substantial work was also completed on Map #5 — South-Central Ontario and Map #8— Eastern Ontario, of the new map series.

Research and Development Branch

The traditional focus of the R&D Branch continues to be solving physical problems arising in the design, construction, maintenance and safe operation of the highway system. Last year, special emphasis was placed on developing improved technologies for the repair and rehabilitation of pavements and bridges. Much of the work was carried out by ministry staff, but about one third of the projects were undertaken by consultants or universities under the Ontario joint transportation and communications research program.

Pavement Research

This group prepared and distributed "pavement management system guidelines for Ontario municipalities" as part of the research program to improve existing pavement management systems. Work also continued to support an upgraded pavement management system within MTC.

Research was undertaken in support of a national study of truck weights and dimensions, to achieve a uniform understanding of the effect that heavy trucks and trailers have on pavement performance. Work on the design of experimental pavements and their instrumentation was begun.

A study on crack seal performance and techniques was completed in cooperation with Ottawa District and a report was made to the 1983 Roads and Transportation Association of Canada (RTAC) conference. The findings helped to form trial guidelines for use by district maintenance staff in sealing cracks in flexible pavements. At the same conference a method for measuring the soil moisture content based on the transmission of an electric current through the ground over a period of time (time domain reflectometry) was also presented.

Technology for the automated sorting of trucks at truck inspection stations was also developed. The weigh-in-motion sorting and an associated traffic management system to control truck movement through inspection stations was made possible by combining a weigh scale with an electronic microprocessor and video recording of traffic directed into the inspection station.

Highway Operating Systems

To improve the safe and non-intrusive operation of highways, a variety of reserach activities concerned with the properties of pavement surfaces, noise, illumination and safety barriers were undertaken.

Staff analyzed and classified surface reflectivity of Ontario pavements for the purpose of lighting design, developing and testing noise barriers and different mathematical models to predict the effectiveness of barrier installations. Staff also monitored the performance of a new median safety barrier.

Structural Research

The second and much improved edition of the Ontario Highway Bridge Design Code was published in collaboration with the ministry's structural office and in cooperation with university and consulting engineers.

A major contribution was also made in the preparation of design criteria for transit structures, with particular emphasis on the forthcoming GO-ALRT transit system.

An unbiased and relatively inexpensive survey of vehicle weights was conducted in Toronto by instrumenting a bridge and turning it into a weighing device.

Ontario has been kept in the forefront of bridge engineering research in North America. Papers prepared by staff, based on research conducted in this office, have been accepted for presentation at two major international bridge engineering conferences to be held in North America in 1984.

Materials and Engineering System

In the materials area, staff conducted research on the corrosion of weathering steel bridges, as well as the durability, and rehabilitation of reinforced and prestressed concrete structures. In the environmental area, work concentrated on the use of mineral aggregates, problems associated with snow drifting and minimizing environmental impacts resulting from highway construction or operations.

The new engineering systems section was formed to examine a broad range of projects such as winter maintenance operations and the effect of highway design on maintenance.

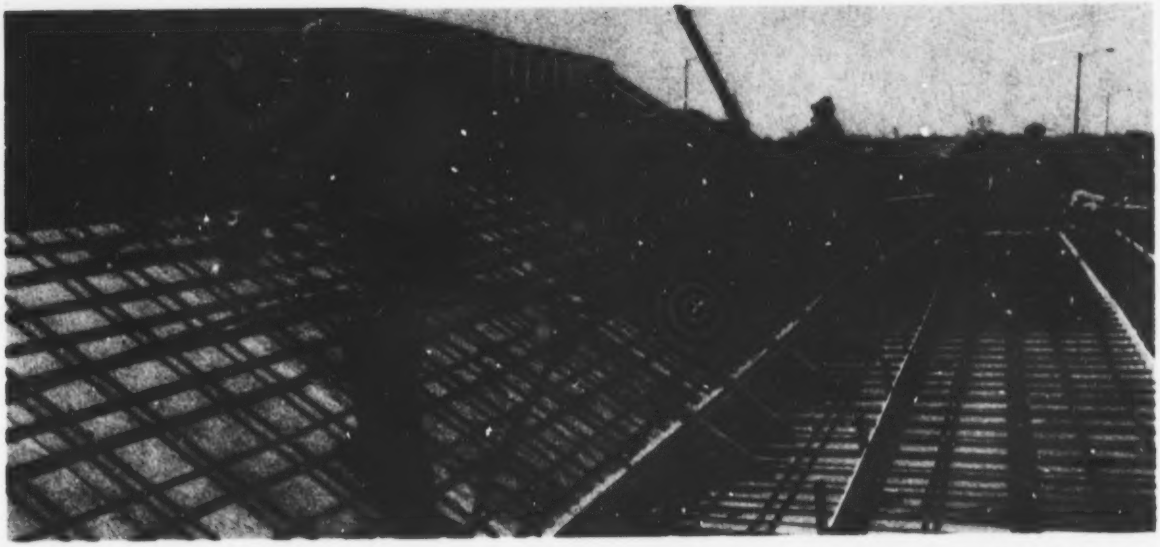
Activities for the year included:

Four second-generation cathodic protection systems designed and installed on the columns of the Burlington Skyway Bridge.

In a joint study with Queen's University, staff examined the effects of surface cracks on the corrosion of reinforcing steel in concrete, concluding that narrow cracks do not affect long-term performance.

Staff compiled a two-part bridge deck rehabilitation manual, describing how to conduct condition surveys and prepare contract documents for the rehabilitation of concrete bridge decks.

Staff also developed methods of analysis for design of geotextile



reinforcement for the construction of earth embankments over soft subsoils. A report on road and bridge deck drainage systems was prepared, and physical testing undertaken to develop Ontario provincial standards for grate inlets.

A new type of snow fence and flattening of side slopes in drift-prone areas were both tested. The study was aimed at reducing the effects of snow drifting and white-outs in some problem areas. In addition, the environmental impact of road salting was studied and reported.

The new products committee processed information on 64 products for use in Ontario highways. These products were either commercially available or being developed by industry. Information on new products was distributed and a prototype electronic new products library, using the ministry's computer and communications network, was developed.

Estimating and Engineering Claims

On January 1, 1984, the ministry combined two offices to form the estimating and engineering claims office.

Estimating office staff operated with a complement of 24, prepared the official estimate on 238 contracts with a tender award value of $264,434,749.39. Recommendations for award were made to senior ministry officials on 233 contracts and non-award on five.

Personnel also produced 127 construction cost comparisons, made recommendations for cost effective design alternatives, 265 contract item unit price negotiations and provided 518 preliminary project value estimates for the multi-year program.

Reports were prepared on unit bid prices, cost per kilometre construction, equipment rental rates and minimum truck haul rates for internal use and outside agencies.

Engineering claims staff, which includes the new claims analysis section, taken over from engineering audit, resolved engineering claims submitted on capital construction and maintenance contracts submitted by the industry. Construction expertise in claims and related matters was supplied to head office and regional units.

Contract Management Office

Staff were responsible for the development of new policies and procedures related to contract management, quality assurance, labor management and staff training required for MTC construction activities.

The major thrust for these policy matters included:

- Development of performance specifications;
- Review of contract staffing; and
- Contract document review process.

Staff prepared final tendering documents for 185 contracts, and provided the official interpretation and clarification to contractors during the bidding stage.

Verification of quantities supporting final ministry payments to contractors by the regions was carried out on 246 capital contracts.

Property Office

Policy and procedures for appraisal techniques, acquisition of property, the rental, management and disposal of surplus lands and the quasi-legal aspects of the purchase of real estate in the title-searching and conveyancing functions were developed by office staff.

Using these policies and procedures, staff in five regional offices negotiated 874 amicable property settlements. The ministry expropriated 134 properties to obtain title for land required to permit contracts to proceed. Appraisals and acquisition of properties required for the GO-ALRT project were also conducted.

MTC expended $19,204,714 in payment of compensation in acquiring title to lands required for highway projects. An additional $454,458 was paid to owners affected by expressways, subject to cost-sharing agreements between the ministry and municipalities involved.

Revenue of $4,331,408 from the sale of surplus land and $744,576 from leasing properties was received.

Personnel carried out periodic audits of the five regional property sections to ensure adherence to proper policies and procedures and, in addition, provided technical advice and expertise when requested by regional staff.

The office was responsible for the resolution of all outstanding claims which could proceed to the Ontario Municipal Board, Land Compensation Office for arbitration. The ongoing caseload involved about 75 properties with decisions handed down, or negotiated settlements procured, in about 22 cases.

Another major responsibility was to monitor and review property appraisals carried out by regional staff and fee appraisers. This involved some 144 desk reviews of which 25 were arbitration appraisals. An additional, 62 field reviews were carried out of which four were regional requests, 33 were reviews of staff appraisal reports and the balance of 25 were arbitration reviews.

The ministry's formal training program consisted of courses involving appraisals and negotiations to which both this ministry and MGS participted. In all, 38 staff members attended the advanced appraisal course, while two participated in a probationary agents course.

Highway Operations and Maintenance

Maintenance Branch

The Maintenance Branch consists of maintenance management, productivity and development, and signs and building permits sections.

During 1983-84, the branch continued to fulfill its mandate of being responsible and accountable for the preservation and appropriate level of maintenance of the provincial highway system, through establishing policies and standards, allocating funds, providing functional direction for the delivery of the maintenance activity throughout the ministry and providing technical expertise.

Maintenance Management

Section staff sustained the computerized maintenance management information system, enabling maintenance managers to plan, organize, direct and control activities. They also developed relevant policies and procedures, monitored work performance and provided technical expertise and training.

During the past year, an aggressive effort to implement recommendations resulting from an extensive review of the entire maintenance management process began. Efforts have also begun to automate the planning process, utilizing micro-computer or mini-computer terminals to reduce the time required to complete the annual performance work plan in the districts.

Maintenance quality standards and operating instructions were selectively revised to reflect current policy changes and technical improvement. Field studies were performed to evaluate current maintenance practices. Staff began a project to coordinate and monitor pavement rout and seal repairs to evaluate long term benefits of methods and materials, as well as benefits of performing this type of preventive maintenance procedure. This project will continue for the next few years.

Some 500 maintenance personnel received winter maintenance training to ensure those participating in winter maintenance were aware of policies and practices.

During the winter, 195 private snowplows were used instead of ministry-owned and staffed units, representing an increase of 60 over the previous winter. A combination of 93 MTC and private snowplows were operated by one person per plow.

Special Maintenance Services

Staff evaluation of materials, products and processes for cost-effectiveness continued, with some initiatives reaching successful completion.

Zone paint material tests, performed during the 1982-83 fiscal year resulted in the development of a revised specification for traffic paint. Five districts purchased a portion of their paint needs for 1984 using this specification for further evaluation.

Conversion of all zone-striping machines to apply hot paint was completed, resulting in a reduction of total equipment needs from 17 to 16 units, with significant savings in capital expenditures as well as labour costs.

An extensive evaluation of thermoplastic pavement markings was undertaken. The performance of this material will be documented for another year.

A new specification covering the purchase of overhead garage doors was developed and undergoing trial evaluation.

The development of a method for recycling or disposing of environmentally unacceptable waste materials (cleaning solutions, paint, etc.) has begun in conjunction with environmental office staff.

Landscape Planning Unit

Planning staff completed 29 landscape plans and an additional two were designed by consultant architectural firms. One of these, the Hwy. 409 entrance into Lester B. Pearson Airport, was prepared as a bicentennial project. In eastern Ontario, schemes were drawn up for the Norris Whitney Bridge parkette on Hwy. 14, and United Empire Loyalist Commemorative Gateway on Hwy. 33. Four landscape contracts were inspected by landscape architectural consultant firms.

Staff provided input to projects on the capital construction program by providing inventory assessment and interpretation of vegetative and aesthetic factors during preliminary and detail design stages. In total, landscape development design advice was provided on 76 projects.

Landscape planners also provided the GO-ALRT program with a review and monitoring function on landscape architectural issues.

As part of the highway rest picnic information site policy review, staff prepared and distributed a questionnaire to acquire information relative to provincial roadside sites and their amenities.

Landscape Operations Unit

Providing technical assistance and the monitoring of roadside vegetation management activities continued to be a top priority. During the year, staff provided expertise to all district and regional offices, assisting local managers with their landscape activities. A training seminar was held in northwestern region for maintenance and construction staff involved in the vegetation management field. In addition, at the request of the municipal engineers liaison committee, a week-long course in roadside vegetation management was prepared and conducted for municipal employees and attended by approximately 40 candidates from across the province.

Following extensive soil testing and field evaluations, site-specific recommendations, which included grass species, fertilizer types and rates, etc., were provided to district maintenance staff for seeding the Detour Lake mine road. Over 350 hectares were seeded with a maintenance-free vegetative cover and erosion was satisfactorily controlled.

Following the issuing of the new seeding specification and in a continuing effort to improve the ministry's results in erosion control, the seed supply specification was revised. A grass species native to Ontario has now been included and an expensive imported variety eliminated from standard MTC seed mixture.

Studies were carried out on the results obtained in contract landscape planting. The plantings consisted of approximately 13,700 units of nursery-grown coniferous and deciduous trees and shurbs planted by contracting firms and resulted in approximately 86 per cent survival. Considering the harsh environment in which the planting takes place, the results are considered acceptable. In an effort to improve the quality of plant material supplied to our district maintenance forces for planting, the ministry's specification for the supply of trees and shrubs was metricated and additional changes implemented in accordance with practices utilized by the nursery industry.

Design modifications to the existing weed sprayers were recommended and provided to district maintenance staff. When implemented, they will increase the operational efficiency and productivity of these units by a third. Basically, they consist of additional nozzles and associated hardware on the spray boom to increase coverage by an additional three metres.

Sign & Building Permits Section

Staff continued to address the issue of improved customer service, through items such as a more streamlined permit format and issuing procedure as well as a shift toward computerized record maintenance.

Head office personnel continued to provide policy, procedural and technical advice to the five regions and 18 districts.

Changes to the ministry's sign control policy were prepared for senior management review, reflecting the combined input of the product user as well as the Ontario advertising industry.

They addressed issues such as the need for a new policy for development or construction site signing as well as time and temperature displays, increased location sign sizes, the use of read-o-graphs, the new high-tech electronic message displays.

Another project was the successful negotiation and implementation of a letter of common understanding between Bell Canada and MTC, reflecting both parties' desire to better utilize the utility corridors on MTC rights-of-way.

Training seminars were conducted in the five regions for district inspectors of sign & building permits and other interested staff.

New building starts were up with a total of 2,563 issued with a construction value of $272,963,790. This was an increase of 550 over last year. Also 1,394 new entrance permits were issued, up 52.

The number of field advertising signs approved under permit for 1983 was 7,713 with a fee value of $268,064.

Other permits issued included: 1,131 encroachment permits; $1,394 entrance permits; 90 legal agreements for coaxial cable and gas pipelines; 1,117 location sign permits; 696 portable and temporary signs. There were also 2,660 guide signs issued, which included the ministry's new rec/resort signs.

Because of new streamlined policies and close contact with the regions and districts, there were fewer infractions this year.

A major drive was mounted to have all the old black and white rec/resort boards changed over to the new chocolate, white and green boards because 1984 will be the last year for the old ones.

The ministry was grateful for the extensive cooperation given by MTR tourism ontario and the (NOTO) Northern Ontario Tourist Outfitters Association for their assistance in this project.

Traffic Management and Engineering Office

Staff developed policies, procedures, standards and specifications; provided technological leadership and carried out development of traffic signs and markings, signals, electronic control systems, electrical design and maintenance, freeway traffic management, traffic devices, traffic accident data and traffic analysis. They also provided program delivery in electrical design for all regions except central.

In Traffic Signing, two special signs commemorating Ontario's Bicentennial were developed. They were erected at all highway border crossings into the province. In addition, a special route marker was developed for the Loyalist Parkway, a section of Highway 33 from Trenton to Kingston, commemorating the arrival in Ontario of the United Empire Loyalists after the U.S. Revolutionary War.

New policies and sign standards included a golf course marker for resort area signing and a neighbourhood watch community sign for use in municipalities.

The policy of signing local radio stations in northern Ontario that provide traveller information was extended to several designated adjacent areas with very few radio stations. Diesel and propane fuel signing was provided for freeway service centres on Highways 400 and 401 where applicable.

A study was initiated on reflective sign sheeting used on freeway overhead and large ground-mounted signs, to determine the most cost-effective sheeting materials that met visibility standards. Work continued on revisions to the manual of uniform traffic control devices.

In traffic signals, a project was initiated to convert SSTOP, a Canadian signal network optimization program, for use on a microcomputer. When completed, this will allow municipalities and consultants to use the program. Personnel also continued application development on the model 170 controller. Studies were undertaken in the areas of signal capacities and signal displays and work undertaken on the revision of the signal section of the Highway Traffic Act. The amendements were expected to become law in the spring of 1984.

In electrical engineering, a major effort was directed toward preparation and implementation of a development plan, with the objective of improving manuals, standards, specifications, design procedures, contract preparation, maintenance, technical development and cost-effectiveness.

lighting poles, was investigated and approved as a cost-effective alternative to conventional lighting in certain freeway applications. Investigation continued on programmable lighting, whereby the lighting levels on the highway can be varied with traffic and weather conditions to achieve better use of energy. A report was issued on experiments conducted on tunnel lighting with regard to improved visibility and safety and reduced energy demand.

MTC now has 225 model 170 microprocessor-based traffic signal controllers in operation, excluding those turned over to municipalities for operation within the urban computer-controlled signal system. Ministry development and specification of these controllers has supported the efforts of Canadian suppliers who recently completed an order to supply such signal controllers to the states of New York and California.

Technical assistance was provided to municipalities studying, installing and operating computerized traffic control systems, assisted by a ministry subsidy.

Preparation of a new technical specification for the installation of vehicle detector loops was initiated.

Development began on a computerized electrical record system, primarily for use of the district electrical staff in processing records and reports.

In freeway traffic management, eastbound operation of the QEW system in Mississauga continued. A study was initiated to examine the feasibility of expanding the existing system to include the westbound lanes and extend the limits east to the Gardiner Expressway.

Construction of the control centre for the QEW-Burlington Skyway system was undertaken. Acquisition of the computer equipment for this system was initiated and development of the application software begun.

Corridor Control Section

Section staff were responsible for policies relating to access control and the compatibility of development with provincial transportation systems. Some 4,500 land development applications were reviewed to ensure compatibility. Other activities included two major studies:

i) Computer information management system, developed under our direction by the Computer Services branch; and
ii) Route protection methods for transit, undertaken by consultants for GO-ALRT with our assistance.

Equipment Engineering Office

Some 17,000 pieces of equipment, ranging in size from 10-ton snowplow units to chain saws were used by the ministry to enable it to provide various services across Ontario. The safe operation, repair and maintenance of this equipment — which cost approximately $78 million — was the concern of this office.

During the year, staff continued to discharge its functions, including:

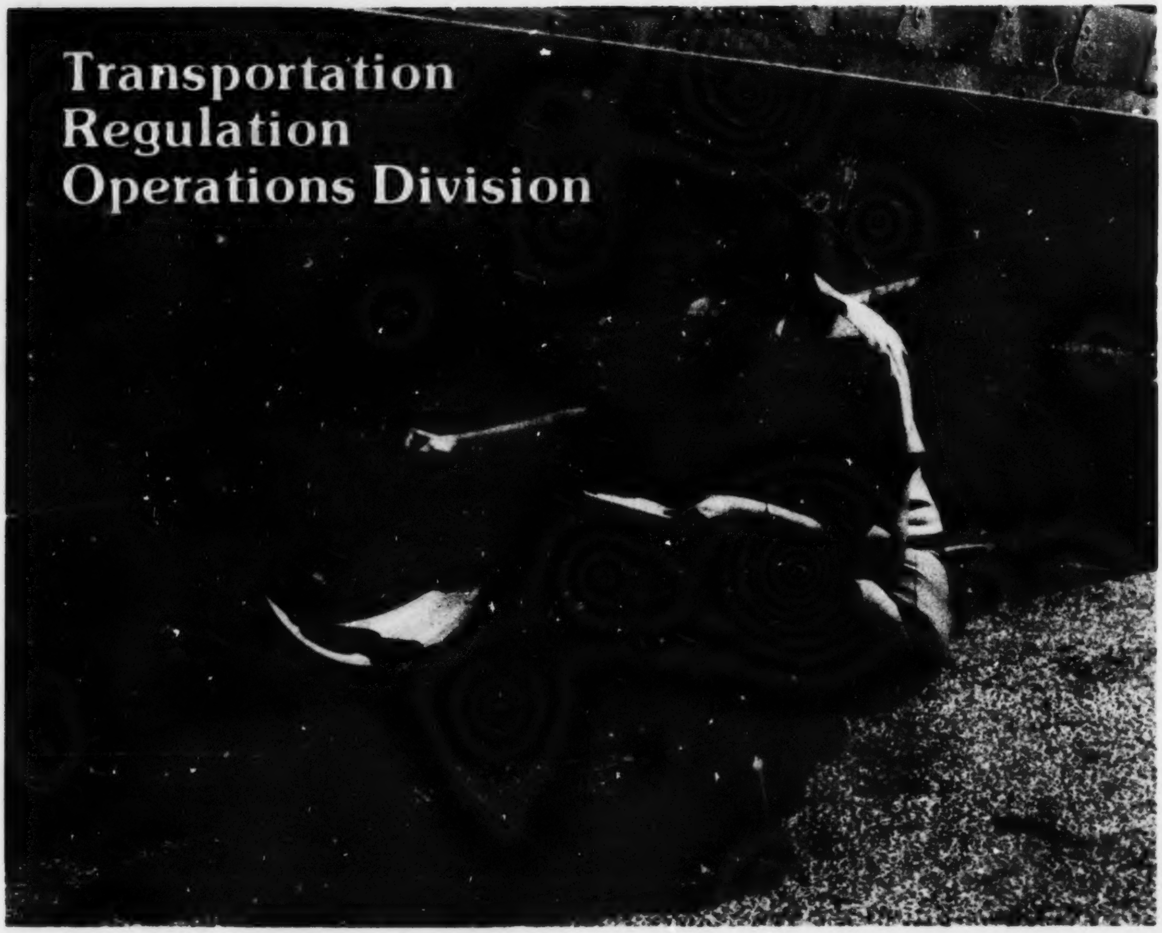
- Establishing the policy under which equipment would be operated, repaired and maintained;
- Providing training for equipment supervisory and technical staff;
- Specifying and initiating requests for new equipment;
- Building certain specialized equipment;
- Evaluating new equipment likely to be of use to MTC; and
- Providing fleet services for Downsview head office.

Highlights were:

- Implementing improvements to the equipment inventory system;
- Continuing to coordinate the ministry's province-wide safe driving roadeo in 18 districts and head office;
- Expending $6.3 million in new equipment, of which major acquisitions included:
  - 164 cars and light trucks, 66 heavy trucks and 42 sanders;
- Converting two zone striping units from rear single axle to tandem rear axle machines, improving productivity to the extent southwestern region will reduce its striper complement by one;
- Evaluating numerous new pieces of equipment, including;
  - Tungsten carbide snowplow blades from potential new suppliers, including a Swedish blade with carbide chips impregnated into the steel;
  - Holley propane conversion for cars and light trucks;
  - Snowplow equipment from two new suppliers (Larochelle and Schmit);
  - A natural gas powered pick-up truck supplied by research and placed in actual fleet use in district 6;
  - A fiberglass dump body which has the potential for longer life and reduced maintenance over steel bodies; and,
  - An evaluation of snowplow spare parts requirements which allowed central stores to reduce inventories.

Safety and Regulation

Transportation Regulation Operations Division



Coordinator of Resources Office

Office staff monitored program, staffing and financial resources for management of the Transportation Regulation Operations Division and Transportation Regulation Development Branch.

They monitored all program and sub-program delivery areas under the ADM Safety and Regulation to establish adequate service levels and ensure human and financial resource utilization efficiency is maximized.

Staff also established and proceeded with implementation of a human resource long range plan for all delivery areas.

Systems Improvement Office

Personnel provided systems development and maintenance support services for all systems (both manual and computer) within the safety and regulation program. Major initiatives were undertaken in the following key areas:

- Systems development and maintenance in relation to the major new Vehicle Registration System with 350 agents on-line across the province and major head office components in both Downsview and Kingston;
- Ongoing maintenance and development support in relation to the major driver system to attempt to effect efficiencies and savings, wherever feasible;
- Continuing development and support in relation to the comprehensive program-wide management reporting system and associated work measurement efforts; and,
- Business systems development support to the trucking regulatory reform implementation project (TRRIP).

Ongoing support continued in the development and maintenance of policy/procedure manuals and internal/external forms across the entire program.

Operational Policy and Standards Office

In October 1983, the highway carrier and vehicle inspection administrative functions of the program administration office along with the dangerous goods transportation staff were amalgamated to form the new operational policy and standards office. The main function of this office was to assist and promote a uniform application of motor carrier regulatory controls.

Personnel now provide technical expertise as well as operational procedures and standards to assist in interpreting ministry policies on regulatory issues. The research and development of operational policies and procedures are documented and distributed in the form of policy directives.

Staff develop, coordinate and conduct training courses for MTC field staff. Various information posters and pamphlets are produced and distributed as part of the awareness programs of this office. This information is disseminated to various federal and provincial agencies, the trucking industry and local governments. Technical and program information is also provided to industry, the media, the general public and the ministry's enforcement staff.

Administrators and policy officers also assisted in the development of new or amended legislation and in the development and implementation of new motor carrier programs. Examples of such on-going projects include the coordination of Ontario's strategy in the creation of a nationally uniform code for the transportation of dangerous goods; the development of a model federal-provincial agreement and the fuel system inspection program for propane-fuelled vehicles.

Compliance Branch

Staff promoted the regionalized delivery of a uniform and rational compliance program with responsibility for the carrier licensing and information office; office of special investigations; operational policy and standards office; weights and dimensions office and vehicle standards office.

Personnel monitored such programs to insure consistency with governing legislation, policies, and procedures, providing coherent direction to Enforcement officers in respect to compliance of economic regulatory control legislation and the Highway Traffic Act.

In addition, the branch in conjunction with transportation regulation development, aimed to reflect an awareness of Ontario's needs, relationships with other jurisdictions, and the exchange of compliance information.

The education, cooperation and communication with both the regions and industry were continually under examination and development toward an effective program which responds to Ontario's needs.

Special Investigations

This office, previously the investigations and prosecutions office, was created in October 1983, through a reorganization of the compliance branch.

The current role can be split into three areas: carrier control, special investigations and administration and planning.

In its special investigations role, staff carried out complex investigations as well as those referred to it by senior management and the regions. In addition, they conducted investigations in northern and northwestern Ontario and Quebec on behalf of the regional investigations units.

In their carrier control capacity, staff was responsible for ensuring compliance pursuant to the PCV Act, the PV Act, the MVT Act (Canada) and HTA through means other than the court process; such as initiating operating authority referrals and vehicle registration and operating authority cancellation proceedings. In 1983, they referred four cases to the OHTB for review and initiated cancellation proceedings against 13 commercial vehicle operators.

In 1983, staff arranged for service of 937 summonses out-of-province related to prosecutions in Ontario. Coordinated regional and head office data also showed there were 3,142 charges pending before the courts. The office developed ways to improve carrier control through improved detection, prosecutions and sanctions strategies.

Faced with changes in the compliance area resulting from regulatory review and reform — recommendations of the PCV Act review committee, the Uffen Commission, the bus committee and new dangerous goods legislation, staff examined the way MTC delivered its compliance program. Consequently, the branch was in a transitional phase between reform development and implementation and was in the process of redefining its role and mandate.

Carrier Licensing and Information Office

Staff was responsible for the monitoring of Ontario Highway Transport Board certificates for compliance with the Public Commercial Vehicles and Public Vehicles Act and the Motor Vehicle Transport Act (Canada); the issuance of operating and vehicle licences associated with the board-issued certificates; administration of Ontario's participation in the Canadian Agreement on Vehicle Registration (CAVR); the issuing of special permits for the movement of overdimensional vehicles and loads; licensing of motor vehicle inspection stations; the issuing of safety standard certificates and dump vehicle and bus inspection stickers.

Weights and Dimensions Office

Staff provided consulting service to ministry groups engaged in the preservation of the highway system by the review and approval of permit applications, involving the proposed movement of vehicles and loads exceeding routine guidelines for weight and dimensions, and advisory service to industry groups wishing to take maximum advantage of the transportation facility. They also assisted in the development of weight enforcement strategies as applied to both system and equipment needs.

Transportation Regulation Development Branch

Safety Coordination and Development Office

To support the ministry's highway safety objectives, staff initiated and coordinated the development and implementation of a broad range of countermeasures, many of which were directed towards reducing accident losses by improving driver performance.

Viewing driver attitude and motivation as a potentially high pay-back area for reducing accidents, staff focussed efforts on driver control programs, synthesizing results of past driver improvement studies with a view to evaluating existing programs and developing innovative new approaches in this area.

One such project involved a preliminary evaluation of Ontario's Probationary Driver Licence Program which was found to have a positive impact on reducing the number of violations and accidents among newly licensed drivers.

Staff also participated in an international symposium on young driver accidents in an attempt to devise new strategies to improve the safety of this group of high-risk drivers.

Recognizing that motorcycle riders constitute another high-risk road-user group, personnel conducted an in-depth analysis of fatal on-road motorcycle accidents and convened a seminar on safety issues. Participants, included motorcycle educators and safety experts, the police, rider organizations and the motorcycle industry. A number of countermeasures were subsequently developed, including development of a new motorcycle operator's manual and changes to motorcycle licensing procedures. Additional studies and data system changes were undertaken to provide more information on motorcycle accidents for future initiatives.

Throughout the year, the problem of the drinking driver remained of primary concern. Staff worked with public and private organizations across the country to share information and devise strategies in an attempt to come to grips with this major highway safety issue.

The importance of accident data in the development and evaluation of highway safety policies and programs was highlighted during the year. In addition to compiling and publishing comprehensive annual motor vehicle and snowmobile accident data for the province, analyses were conducted to identify factors and trends associated with specific types of accidents, particularly fatal and multiple vehicle accidents. In order to better meet the safety policy and evaluation requirements of the 1980's, a long range plan for the provincial accident data system was developed.

As part of its driver education support function, staff finalized the development of a new driver education textbook and curriculum and coordinated a seminar on driver education issues with safety experts and industry representatives. Other activities included development of a new child restraint usage brochure to advise parents how to correctly choose and use child safety seats, and developmental work in the areas of school bus safety and daytime running lights for motor vehicles.

Program Evaluation Office

Staff evaluation efforts were carried out through the government managing-by-results concept.

Interface with the sub-program working groups resulted in the refinement of many of the results spectrum indicators.

Monitoring of fatal accidents, with special emphasis on motorcycles, continued as a major initiative.

Project Development Office

Throughout the year, staff provided consulting and support services to both internal and external committees, including the ad hoc committee on log hauling. A major project covered the investigation and development of a photo driver licence delivery system in anticipation of such a program being instituted.

Through the legislation development process, the Off- Road Vehicle Act was prepared for debate in the Legislature and received Royal Assent. Subsequently, regulations were developed to allow for full implementation during 1984. The Legislative Review Committee remained active in producing a Fall bill to amend the Highway Traffic Act, which allowed the filing of numerous regulations.

Vehicle Standards Office

Staff provided consulting service to MTC and other ministries, police, lawyers and the public in matters related to vehicle legislation, standards and performance. They also recommended and assisted in the development of legislation and regulations.

Staff also took leading roles in the development of propane vehicle inspection regulations and a national standard for public motor vehicles used in the transportation of physically handicapped people. It is also taking an active part on the technical steering committee responsible for a $2.8 million national truck size and weight standardization project. In addition, it responded to a number of proposed new and amended federal standards affecting the manufacture of new motor vehicles.

The office assisted police in their investigation of a number of accidents involving heavy commercial vehicles, served as expert witness at the coroner's inquests and court trials and responded to coroners' jury recommendations.

Trucking Regulatory Reform

In June, 1983, the Public Commercial Vehicles Act Review Committee completed its task of developing new principles by which to regulate Ontario's trucking industry. The report, *Responsible Trucking*, offers an outline of regulatory reform, emphasizing effective goods transportation and fair and equitable competition.

The implementation of reforms is expected to take about two years to complete by members of the implementation steering committee. A shared structure of government-industry consultation, they will recommend how to implement reform measures. In addition, there's an open channel of continuing communication with all parties interested in regulatory reform of trucking, through the truck transportation office.

A number of government-industry sub-committees were also established to deal with key areas of reform, including enforcement, agency reform, rates and competency. A licence re-write commission was given a mandate to simplify existing operating authorities.

Major changes aimed at reducing regulatory complexity and promoting fair and equitable competition will be tabled in the legislature in the fall of 1984 and, if accepted, would become operational at the end of 1985.

Ontario Commission on Truck Safety

In April of 1983, the Ontario Commission on Truck Safety, chaired by Dr. Robert Uffen of Queen's University, submitted its final report to the minister. The commission investigated and reported on all facets of truck safety in the province. Sixty-one recommendations were made. Since the report was tabled, action has been taken or is pending on over half of them in an effort to improve truck safety.

Bus Transportation Office

Staff were responsible for the continuing deliberations of the ministry's bus committee, assumed the chair of the CCMTA working group on bus transportation, coordinated the administration of Ontario's inflation restraint legislation as it applies to the Public Vehicles Act, and consulted directly with carriers and communities contemplating major changes in services and/or tariffs.

In response to MTC presentations on the subjects of rural mobility and intermodal transportation, the bus committee received a number of briefs on a wide variety of subjects, prepared by the Ontario Motor Coach Association, the Ontario Advisory Council on Senior Citizens, and other groups. As a result, members are now in a position to initiate a bus industry-VIA Rail working group to facilitate intermodal travel, and directly examine the impact of the licensing relationships between scheduled services and charter trips as they affect services in rural areas.

The committee was also instrumental in the completion of a multimodal travellers survey coordinated by the ministry's intercity office, in arranging for the Ontario Highway Transport Board to investigate in detail an industry proposal in favour of deregulating the licensing of school bus operations, and in the completion of an intercity bus costing study and model.

Finally, the Canadian ministers responsible for transportation and highway safety, in the fall of 1983, asked the CCMTA working group on bus transportation to draft guidelines for the carriage of disabled passengers by intercity bus for consideration at their meeting in the fall of 1984. In its capacity as the chair, the bus transportation office consulted with groups of disabled people as well as intercity bus carriers for this purpose.

Truck Transportation Office

Personnel continued to provide the support necessary to maintain a stable operating environment for both the trucking industry and users of trucking services.

To promote efficient highway transportation of goods between Ontario and other jurisdictions, there was liaison with other levels of government and representation through the Canadian Conference of Motor Transport Administrators and the American Association of Motor Vehicle Administrators.

Staff were closely involved with the Transportation Regulatory Reform Implementation Project, assisting in the development of regulatory reform proposals. They also assisted in implementing recommendations of the Uffen report.

Negotiations led to further reciprocal commercial vehicle registration and agreements between Ontario and other jurisdictions.

Licensing and Control Branch

Operational Policy Office

Staff was responsible for development of new operational policies and procedures; the evaluation and revision of current operational policies and procedures; the monitoring of field and head office operations to assure consistency of the administration of operational policies and procedures; and staff training to meet changes in policy and procedures.

Personnel covered two major subject areas, each having a coordinator and support staff, including: vehicle licensing and control; driver examination; and driver improvement.

Driver Improvement Office

Staff were responsible for ensuring adherence to standards established for the licensing of drivers and monitoring drivers' post-licensing activities. This was accomplished through the activities of two sections: driver control and medical review.

Driver control entailed maintenance and administration of the demerit point and probationary driver systems and administration of licence suspensions and reinstatements related to driver behavior and attitude.

Medical review staff were responsible for monitoring drivers required to file periodic medical reports as a requirement to maintain their class under the classified driver licence system, and drivers identified as having medical conditions making it unsafe for them to operate vehicles. They were also responsible for the administration of medical-related licence suspensions and reinstatements.

Both sections contributed to the maintenance of an accurate cumulative operating record of each Ontario driver.

They also provided administrative support to other Toronto offices in record maintenance, typing, revenue control, mail distribution and computer output quality control for renewal applications and licences.

Production Operations

The production operations office was responsible for ensuring the effective operation of the branch's Kingston-based office; providing direction to the field support, licensing operations, financial control and stock management and support services offices.

Staff provided centralized training, production control and administrative services.

All offices were fully functional in Kingston after relocation from Queen's Park and Downsview in the spring and summer of 1983.

Licensing Administration Office

This office was responsible for answering enquiries from the public, government agencies and other groups regarding the policies, regulations and legislation governing drivers and vehicle licensing in Ontario. In addition, it provided a search service of driver and vehicle records for the public, enforcement agencies and the courts.

Licensing Operations

This office consists of the following three sections:

Renewal processing which provided Ontario's motoring public with a mail-in service for both driver and vehicle renewals;

General issuing which provided a mail-in service for corrections, changes of address, replacements, requests for application, transfers, own-choice plates and name changes; and,

Driver and collision record input which processed driver improvement transactions and reports of all collisions occuring in the province.

Field Support

Staff received and monitored reports received from 310 appointed issuing agents, MTC offices and 68 driver examination centres. They were checked to ensure appropriate fees were collected and submitted to the Treasurer of Ontario.

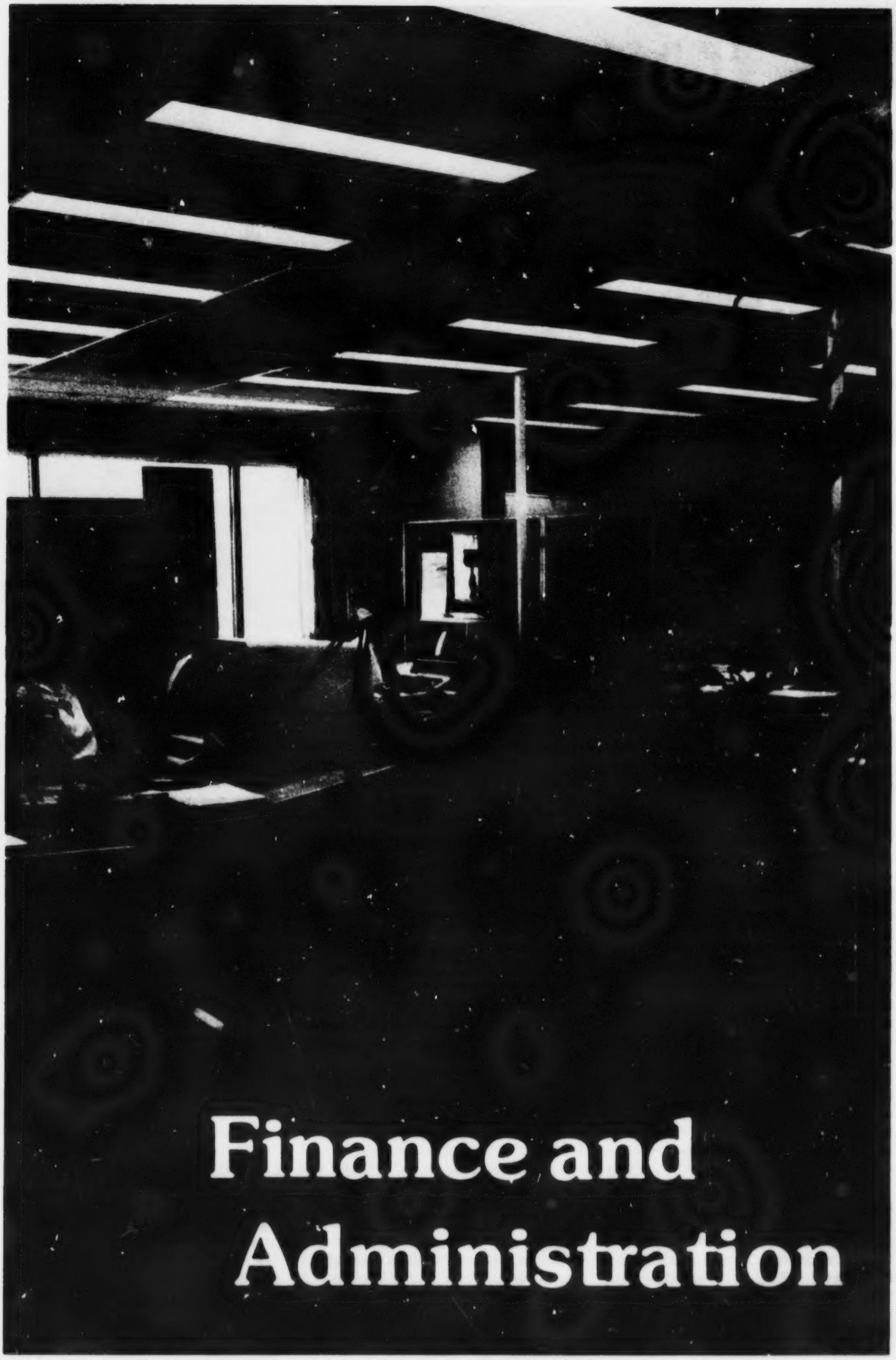
Additionally, the office provided a high-volume inquiry service in a "hot-line" mode to all of the above offices.

Financial Control and Stock Management

This office consists of two sections:

Financial control which accounted for and consolidated all revenue received through driver and vehicle production related activities; and,

Stock management which provided a stock procurement and stock planning function for driver and vehicle stock, forms and material.



Finance and Administration

Transportation Capital Branch

Branch staff was responsible for the effective management of all transportation capital investment resources. In addition, they provided highway planning, priority setting and programming services on a program-wide basis as well as scheduling and expenditure control for capital construction and ancillary investments.

The branch has three functional units: highway program planning office, highway program administration office and capital investments office.

Highway Program Planning Office

Office staff, with supporting sections, planned and co- ordinated future development of the provincial highway program. Functions included annual long- range planning; development of program/sub-program activity priorities; development of system policy; co-ordination and synthesis of highway planning information; and evaluation of program performance and effectiveness.

Through the manager, personnel also provided support to the chairman of the provincial highways program committee.

An increased emphasis was placed on strategic planning and priority setting and there was a move toward planning "alternatives development" and evaluation by the functional executives of the program co-ordinated by the planning staff.

Long-range planning (LRP) involved analysis of issues and demands to match products and services to future requirements. Specifically it involved a calculated speculation of future program issues, financial outlooks and system needs to determine the program future emphasis.

LRP also involved analysis of financial outlooks, public perceptions, major priorities, personnel implications, automation and technology, strategic directions, privatization and other external factors to arrive at program alternatives in capital, maintenance, design and program administration. Specific five-year targets were developed in various aspects of the program so that products and services properly match future requirements and emphasis.

Increased emphasis on strategic planning and priority setting and a move towards planning alternative development and evaluation by the functional executives was co-ordinated by planning staff.

Program evaluation assessed the effectiveness of the program in terms of measurable public benefits and provided information on the relative significance of various sub-programs as well as monitoring results through MBR reporting.

Program priority planning people carried out analysis and development of system rehabilitation and system expansion priorities to obtain benefits for the overall provincial highway program. Priority analysis determined funding to be allocated to each sub-program and activity and identified priority on system improvements and changes.

System analysis staff developed policies ensuring provision of equitable and adequate services on the highway system. The extent and location of system improvements, impacts of level of service changes and variations in quality and quantity standards were analyzed to guide management decisions.

Information systems collected, processed and synthesized information to support the overall planning and management of the program. In addition, staff provided significant technical data and other information for internal use, including background for the "highway distance table" and "traffic volumes King's Highway and Secondary Highways."

Highway Program Administration Office

The administration of the provincial highway program, including operational planning services, the construction plan, program budgeting services and construction expenditure control were the responsibility of office staff.

In operational planning services, the unit continued with the development of an operational planning and management process for the total highway program, with efforts concentrated in the pre-contract engineering area. Support services were also provided to various other program areas, such as: Ontario Highway Transport Board; structural management committee; maintenance branch.

A multi-year construction plan was developed to provide management with the information necessary to direct and monitor capital construction expenditures in response to constraints or initiatives. The annual construction projects report provided the public and legislature with a concise look at the current year of this construction plan.

In-year expenditures were co-ordinated, monitored and controlled on a continuous basis and reported periodically to senior management. Advance notices for contract tenders were prepared and issued to members of the Legislature and press.

Senior management was provided with regular financial status reports. In addition, special statements were provided on the Board of Industrial Leadership and Development, transportation investments, job creation and the Ministry of Northern Affairs regional priority budget and special projects.

Scientific computer systems were used in the process of individual project control. Critical path method (CPM) construction schedules were provided as information to bidders on most major projects. The construction resources evaluation package (CREP) was used extensively to determine construction staffing requirements and related costs. The expenditure forecast system (X-For) continued to provide a calendarized expenditure profile on all projects in the construction plan.

An operational plan was developed for the office highlighting the need to investigate more sophisticated management information systems and office automation.

Capital Investments Office

Restraints required that capital investments be managed carefully. They prevented service "needs" being met in all programs requiring difficult choices on funding and timing of capital initiatives. To aid in these decisions and tie them more closely to the MTC strategic planning guidelines, more comparable information and a co-ordinated approach toward capital investments and trade-off opportunities were needed.

Office staff provided consolidated capital planning and management information and recommendations on proposed and active transportation capital investments. Established in January of 1983 as a part of the strategic organization plan, capital management was emphasized.

Staff objective was to achieve the total transportation capital investment, facilitating effective use of available funds within four transportation programs: provincial highways; provincial transit; municipal transit and provincial transportation/air.

A general framework of operating procedures was endorsed for integration with current practices. This approach was given practical testing in the 1983/84 fiscal year. It continued to be refined and applied for the effective management of capital investments in each transportation program.

Computer Systems Branch

Following the successful completion of the new on-line, real-time vehicle registration system (VRS) and the disbanding of the project team at 3501 Dufferin St. in the fall of 1983, this branch assumed full responsibility for the ongoing maintenance and support of the new system.

Concurrently, the former driver systems office and vehicle systems office were merged into one organization — the regulation systems office. It provided system development and maintenance services for all of the automated systems in the ministry's safety and regulation program, including driver vehicle registration and compliance systems. Technical support for the remote network of the VRS was provided through the planning and technical support office, which also supports other ministry distributed data processing systems such as operations management system (OMS).

The growth of new automated systems in other areas of the ministry continued, resulting in a branch staff increase. Staff complement was 119 versus 102 at the end of last fiscal yer. The total ministry budget for automated data processing for 1983/84 was approximately $21.7 million — an increase of 27 per cent.

Extensive use of consultants to supplement staff assigned to systems development projects was common practice over the past years. Management Board of Cabinet adopted a government standard which provided for 25 per cent privatization of development work. Staff anticipated it will achieve this standard sometime in 1984/85.

Implementation of a ministry policy to transfer responsibility for production functions (such as data entry and data control) from the branch to user areas was started in 1982/83 and continued. Five positions — four to the Financial Planning and Administration Branch and one to the Maintenance Branch — were transferred.

The approved recommendations resulting from an internal study of computer services by the management improvement branch were almost implemented, resulting in three new technical positions: systems education coordinator, systems planning specialist and a software support specialist. Administrative support provided through the branch's executive section was also increased from one to three persons.

The number of micro computers acquired by the ministry increased dramatically in 1983/84 and now totals about 40. The new micro computer resource centre played an important role in supporting the selection and acquisition of both micro computer hardware and software.

It's anticipated the demand for these services will continue in the next fiscal year. As the number of different types of micro computers and software programs increased the range of technical expertise in the resource centre went up. Consequently, staff were asked to develop a micro computer policy allowing MTC to standardize on one or more specific micro computer technologies.

Regulation Systems Office

Staff were responsible for computer systems design, development and maintenance services as well as technical support services for MTC's safety and regulation program. The administration of the Ontario Highway Traffic Act, the Public Commercial Vehicles Act and other regulations is supported through four major automated systems for driver licensing and control, vehicle registration, accident information and highway carrier licensing.

Over 100 operational sub-systems were maintained in support of these four areas. Much of the staff time was spent in completing and stabilizing VRS and ensuring the level of service commitments to the public, police and courts were maintained.

Some of the major activities completed included:

- Implementation of several major enhancement releases of VRS;
- An interface to link D&V systems for change of address information;
- The technical reorganization of the huge data bases used with these systems;
- The application of special optimization techniques to help reduce the inherent high operational costs;
- The evaluation of the impacts of a photo licence system for 5-1/2 million Ontario drivers;
- The design and development of a new stock and financial system to maintain accurate revenue control over the millions of vehicle renewals and transfers each year.

The accident information and highway carrier licensing systems were relatively untouched and required only minimal support.

Transportation Systems Office

Staff provided software application development, maintenance and productivity support services to three MTC programs: provincial highways, provincial transportation and municipal transportation.

About 50 operational systems were maintained in support of structural design, hydrology, road design, transportation planning, research and traffic engineering activities — systems which supplemented the production process in every facet of highway design and transportation planning.

Due to their universal application, several engineering computer programs were requested and given to other government agencies, municipalities, universities and consultants for local computer installations. The ministry's simplified transportation planning package was in use in most Canadian provinces.

Major projects completed included:

- The structural design systems used in the design of the twin Burlington Skyway;
- The road design system made more immediately accessible to regional offices and consultants through online data base enhancements;
- Transit ridership simulation models developed to aid the GO-ALRT project;
- A municipal directory database developed to facilitate communications with municipalities receiving municipal roads subsidies;
- A mineral aggregate inventory system implemented to provide regional design offices with information on 15,000 sources of granular construction material across the Province.

Planning and Technical Support Office

Staff were responsible for providing technical support to branch development offices and ministry client offices in the effective use of information technology, including:

- Development and introduction of improved methods and techniques for systems development;
- Evaluation and introduction of productivity improvement tools for systems development;
- Systems quality assurance and productivity measurement;
- Development of policies, procedure and standards;
- Location and introduction of generalized software for MTC clients;
- Technical consulting, advice and assistance;
- Evaluation of hardware and software products and assistance with acquisition processes;
- Operational support for distributed data processing networks.

A new function was established to undertake information technology strategic planning.

The initial goal was to obtain corporate executive support for the development of policies and strategic directions ministry-wide through the active participation of all programs.

In the past year more than 50 ministry offices made use of the facilities and services of the micro-computer resource centre. To date most micro-computer users have been interested in data base management, decision support and word processing applications.

Management Information Systems Office

Office staff provided systems development support to the ADM Finance and Administration.

About 30 operational systems were maintained in support of financial, operations, project management, equipment management, operations management system, OMS, the MTC financial systems, the human resources inventory, provincial highway inventory and performance budgeting system.

A major thrust was the continuous transfer of responsibility for systems operation from CSB to various users. This was achieved by converting the old style keypunching of input data (at CSB) to on-line data entry at the users workplace. Also users were trained to request and obtain via on-line terminals standard reports as well as special reports using fourth generation languages.

Other major development projects were as follows:

- The operations management system, OMS, was enhanced with the addition of a module for reconciliation of OMS with the financial system. A sign-shop subsystem was also tested;
- The first stage of a standard item code system was implemented;
- The human resources inventory system was enhanced to provide assistance for career and succession planning;
- Development of the workmen's compensation system for the occupational health and safety office;
- A production management system was developed for MTC's instrument repair shop;
- A new accounting system for the CSB was developed.

Arrangements were completed with the Pennsylvania Department of Transportation for possible adoption of the PennDot Contract Management System, CMS, in MTC. A copy of CMS was obtained for testing and evaluation.

Regional Liaison and Production Services Office

Staff provided production support to MTC computer users, municipalities and engineering consultants working on ministry projects.

- Central data entry group provided key-punched cards for MTC's batch systems;
- Acquisition of key-to-disk data entry equipment was underway in response to the increasing demand for on-line data. But due to dropping demand the number of operators was reduced, through reassignments, from 14 to eight;
- During this year the groups made increased use of on-line computer terminals to improve productivity. Major undertaking to upgrade operational documentations was aimed at simplifying procedures. Four technicians were transferred to user areas;
- Automatic plotter group produced engineering drawings for highway planning and construction projects. Simple on-line plotting facilities were also available in all regional offices for a preview of drawings before the final plot;
- System documentation library staff supported the development offices with updating systems to production;
- Computer equipment acquisition group looked after the large inventory of terminals, printers, plotters, controllers, modems, etc.

Human Resources Planning and Services Branch

Branch staff was responsible for the provision of a wide range of services including staffing, human resource planning, staff relations, human resource policy and program review, classification, occupational health/safety, employee benefits/records and staff development.

Branch objectives were primarily related to providing these human resources services to senior and line management and MTC employees in an effective, efficient and economical manner. Branch staff made representations and contributions to corporate human resource policy formulation; provided assistance and advice to managers in personnel matters; prepared human resource statistical data required by MTC and central agencies; ensured equitable compensation and an environment supportive of staff growth and development.

Staff also prepared for development in future directions to serve a changing ministry. There was an increased focus on provision of consulting services and on strategic human resource policy formation. The branch also expanded its use of technology and planned for further expansion in this area. There was also a beginning of the process of re-examining the products, services and structure of the branch itself.

Staff Relations Office

Staff managed a full range of labour relations services, including interpreting and assisting with administration of existing policies, procedures and collective agreements; and the development of strategy and MTC policies and philosophies in the labour relations area.

Major section activities included administration of the collective agreement, providing policy direction on staff relations to ministry management; co-ordination of all aspects of grievance procedure and contract administration; improving managers labour relations knowledge and skills and, participating in union negotiations. The inflation restraint board programs did result in curtailed management labour negotiations.

Staff relations personnel held extensive discussions with the union on the Kingston relocation project, a move completed in September of '83. Staff also provided increased training to line managers in staff relations.

Staffing Section

Staff initiated, developed and administered staffing policies and procedures with emphasis on equitable selection, placement and reassignment of suitably qualified people with appropriate experience and skills required to meet the ministry's needs.

The year marked the completion of the Kingston relocation project involving the transferring and reassignment of approximately 350 employees, predominantly in the clerical and data entry classes.

For the first time, staff participated in the winter experience program and the number of students allotted for summer experience '84 tripled from the previous year. Both were funded by the Youth Secretariat.

Approximately 24 graduates were recruited for the newly re-designed three year management development program.

Section staff participated in two major inter-ministerial staffing projects: first dealing with the feasibility of the Ontario Government employing permanent part-time staff; second, a government-wide service designed to assist managers and employees with surplus reassignment and relocation counselling.

Ongoing services included staffing of permanent and temporary vacancies; information to the public about employment opportunities; and a consulting service to line managers and employees.

Classification and Pay Administration Section

Staff reviewed and classified over 850 positions as a result of major reorganization in head office and several large reorganizations in the regions and districts in the purchasing and supply and district maintenance operations areas.

Several staff were seconded to assist the Civil Service Commission in a major standards development project which will affect nearly 2,000 MTC staff. Other personnel participated in standards development projects for a number of class series, e.g., systems officers, data processing technicians, technician photographic.

High technology word processing equipment was used to produce organization charts and classification grievance reporting, resulting in cost savings and reduced production time.

Classification staff developed and presented seminars on "compensation training for line managers" and participated with the CSC in carrying out wage surveys to obtain data for salary negotiations.

Benefits and Records Administration

Section staff provided a service for the managers, employees and families of employees on pension matters and insured benefits. These also included the administration and documentation of employees regarding classification and pay changes prior to processing through the corporate integrated payroll, personnel and employee benefit system. As part of improving the administrative support supplied by the branch, staff utilized electronic word processing equipment.

Staff also co-ordinated along with the Employee Counselling Services Branch (Ministry of Government Services) a rehabilitation program to provide assistance to employees who had been absent from work for an extended period due to illness or injury.

Work-load demand increased substantially as a result of the voluntary retirement option when some 274 employees took advantage of the option — most of whom sought counselling and guidance.

Human Resources Development Office

Initiatives and Development Section

Section personnel provided consultant and research services to senior ministry committees related to human resources policy and program review and development.

Personnel were also involved in several ministry and branch studies related to the introduction of office automation and the use of new technology. They prepared reports for the ministry technology advisory committee on human resource issues related to technological change.

The section work plan focussed on identifying significant human resource internal and external environmental trends and issues likely to impact on the human resource field. This information and proposed branch strategies to deal with the issues were incorporated in the branch position and prospects paper for use by the ministry's SPC.

Staff developed a human and financial resources recording system, enabling branch managers to monitor the use of time and resources against planned operations and activities.

They were involved in conducting a major study of the ministry's present performance appraisal system. Line personnel were part of the project team.

Staff undertook a number of other studies, including an occupational analysis to define and identify management skills, plus a pilot questionnaire used to measure distribution and degree of mastery of management skills.

Planning Section

Section staff developed human resources planning processes and policies, collected and maintained relevant and current MTC employee data and provided administrative support to line managers, subcommittees and the human resources committee.

The development, marketing and implementation of the revised corporate succession planning system was a major initiative undertaken by staff. The introduction of program human resources committees to develop long-range human resources plans also resulted in a demand for increased consultative and administrative support.

In response to the need for increased human resources information, and a more flexible system, personnel initiated revisions to the computerized human resource inventory to provide multi-user access to meet each program's unique information needs.

Section staff provided for the development, co-ordination and administration of the new management development program and the ongoing management familiarization program which are directed toward the development of managers and potential managers to meet MTC's future needs.

Staff Development and Training Section

Staff provided a comprehensive program of training and development services to management and staff and administered a technical training program for MTC employees and those of Ontario municipalities. The objective was the promotion of organizational and staff growth and development, and employee competence.

Section personnel provided consulting services related to problem-solving and decision-making strategies. Courses emphasized the planning process used by MTC in preparing the strategic guidelines and operational plans.

To culminate the four-tiered MTC management training program, staff conducted management '83-'84, a senior management seminar. The theme addressed the issue of human resources strategy to capitalize on people, systems and technology.

Technical training staff accounted for the majority of the courses offered by the section. They provided co-ordination and instructional services for a variety of technical courses, including courses for municipal employees. Courses taught included road design, construction survey, traffic, and roadside maintenance. Administrative support was provided to the Ontario Good Roads Association courses conducted at the University of Guelph; the grader training program provided at four locations in the province and other courses at the OGRA Northern Road Schools.

Occupational Health and Safety Office

Staff developed MTC policies designed to meet (or exceed) the demands of the Occupational Health and Safety Act to provide a safe and healthy work environment for all MTC employees.

They continued to develop and implement health and safety training courses such as first aid, back care, and ergonomics, also providing consultative advice and expertise to managers for evaluation of health hazards.

Work-related accidents, injuries and illnesses were monitored and the collected statistical information was distributed to all concerned parties.

Other accomplishments included the computerization of the hearing conservation program. Presentations concerning the lead medical surveillance program were made to all sign shop employees,. zone strip operators and some bridge crews. As well, directives were issued pertaining to the proper labelling of hazardous and/or toxic chemicals, and to the legal requirements for the wearing of safety belts.

Supply and Services Branch

Branch staff were responsible for ministry-wide policy and procedures for supply and services. They were also responsible for providing a wide range of services for head office and the Ministry of Northern Affairs (MNA) and for the central purchasing of motor vehicles, tires and petroleum products and disposal of motor vehicles and a wide variety of other items for ministries and agencies of the Ontario Government.

Tenders Section

Section staff maintained strict security over all head office contracts. Approximately 5,126 tenders were received and processed for 722 contracts while some 1,762 contractors/suppliers attended the public tender openings.

In advertising, some 373 insertions were placed to the news media regarding tender calls and public notices.

Sales of contract documents, various construction-related manuals and MTC's contract bulletin produced a revenue of $111,900.

Service Centre Administration

Twenty-three service centres were in operation during the past year, 19 on the MacDonald-Cartier Freeway (401) and four on Highway 400. Approximately $4.8 million in revenue was derived. Facilities and services available on a 24-hour basis included restaurants, washrooms, public telephones, first aid, motor vehicle fuels and lubricants, emergency towing, repair services and 21 picnic rest areas.

Essential services for the physically disabled, such as parking, washrooms, restaurants, telephones, and water fountains, were available at all centres.

There were eight service centres offering propane. In addition, gasoline price indicator signs were installed at five centres, bringing the total number using the signs to 12.

Outdoor information facilities were maintained at two centres, enabling the motoring public to get information on lodging and local points of interest on a year-round, 24-hour basis. Travel information booths were operated at 18 centres, from mid-June up to and including the Labour Day weekend, by the Ministry of Tourism and Recreation.

An inspection program provided coverage on all holiday weekends and most regular weekends. The cooperation of site management and staff led to a low level of customer complaints during the fiscal year.

Esso Petroleum's proposal for their Newcastle service centre, involving both significant structural changes and improvements to the service station layout, and the introduction of a Burger King fast food restaurant, received ministry approval. The scheduled completion date for the site work was set for June 1, 1984.

The Ministry of Agriculture and Food established Ontario fresh produce markets at two highway service centres. The advanced signing was provided by MTC. The growers who sold the produce, and the motorists buying the produce were both enthusiastic. This program is being expanded for the 1984/1985 fiscal year.

Purchasing and Supply Office

Section staff were responsible for the purchase of all construction and maintenance materials and general ministry supplies, totalling about $65 million.

Vehicles and equipment purchasing staff acted in the purchase of vehicles and equipment through standardization of specifications and consolidated purchasing for all Ontario Government ministries and agencies. Here purchases totalled approximately $39 million.

Stores personnel allowed MTC to take advantage of savings by bulk purchasing, also facilitating ministry operational function by having materials available for later use. It also reconditioned and stored bailey bridge components for emergency use. Currently, there are 178 such installations in the province.

Supply section staff facilitated the disposal of all used ministry equipment, surplus material and all government motor vehicles, via public auction or tender. Sales totalled $4.4 million. Review of field operations were conducted where appropriate.

The movable asset control system consisted of approximately 43,000 items valued at approximately $100 million and was coordinated by this section.

Information Management Office

Staff were responsible for providing assistance to MTC and MNA in the efficient and cost-effective management of recorded information.

Information analyists provided extensive services relating to the management of documentary information, including the development of indexing and classification systems, identification and scheduling of ministry records, and the evaluation and selection of office equipment.

Over 12,000,000 records were disposed of in accordance with approved retention schedules, resulting in a cost benefit of $128,000 in reclaimed office space and filing equipment.

Similarly, over 140,000 records were transferred to the Ontario Government Archives, ensuring the preservation of vital information. The microrecording unit filmed in excess of 1,400,000 hardcopy records or approximately eight tons of paper.

Central registry staff were responsible for the coding and indexing of correspondence received from ministry offices. During the year approximately 25,000 pieces of correspondence were coded while over 10,000 records indexed. In addition, the unit received 600 engineering plans, 5,500 legal survey plans and 2,300 survey plans and related documents to be indexed into the title record books. Approximately 12,000 information searches were conducted by registry staff with 24,000 prints of highway survey data and construction records provided to MTC staff and external agencies.

Forms management staff continued their program of progressive improvement in the design, processing and control of MTC and MNA forms. During the year a total of 307 forms were revised, 119 new forms added and 213 declared obsolete resulting in an estimated procurement savings of $696,000. The computerized forms catalogue, containing information on the 2,400 ministry forms currently in use, will be revised during the 84/85 fiscal year to provide additional management data.

Library and information centre staff provided library and reference resources for MTC and the transportation community, acquiring all publications and subscriptions to periodicals and newspapers. They provided reference services, computer searches, inter-library loans and issued two regular publications, *Library News* and *Journal Contents*, to ensure that all clients were informed of current acquisitions and holdings.

References and information requests exceeded 20,000. The centre was also designated as the "public reading room" to comply with the prescribed open government policy and in anticipation of the proposed access to information and privacy protection legislation.

Administrative support staff provided "camera-ready" production services, arranged the printing, distributed and/or sold the 193 MTC manuals and amendments centrally controlled through the information management office. In total, over 14,000 copies were distributed to ministry offices, other government institutions and the public. In addition, staff administered the printing, update and distribution of ministry directives with almost 55,000 copies distributed during the year.

Graphic services personnel were responsible for the preparation and update of engineering indices of technical data (strip plans) on all provincial highways. In addition, they produced "camera-ready" copy for ministry forms and prepared illustrations for ministry manuals and publications.

Map area staff provided for the availability, printing, inventory, sale and distribution of all MTC and topographical maps. In excess of 325,000 were distributed or sold. The year also witnessed publication of the new Inter-City Transportation Guide and the first map in the new Ontario transportation map series.

In May, the admin. improvement section staff were transferred from the special services office. As such, they assumed responsibility for administration of the ministry's convenience and engineering photocopiers and for a wide range of services related to the acquisition, implementation, development and inventory of word processing systems and related office automation equipment. During the year, they conducted 33 feasibility studies (18 word-processing study/reviews and 15 photocopier study/reviews) for new system acquisitions and enhancements to existing systems. Personnel also performed ongoing consulting services relative to applications identification and development.

Graphic Services Office

Staff provided a wide variety of reprographic, offset printing and duplicating services in support of all ministry programs.

More than 22,500 requests for reprographic services were processed for the provision of high quality, black and white and colour reproductions using photographic, diazo, screen printing and rapid turn-around photocopy methods. Approximately 15 million impressions were produced in the offset reproduction facility. Recoveries were in excess of $781,000.

Administration of the MTC and MNA identification card issuing program was also a responsibility.

Special Services Office

Accommodation Services

Unit staff were responsible for the designing of various MTC offices, including ministry space entitlements for submission to MGS for Management Board.

They also liaised with MGS on the relocation of D&V staff to Kingston re: block plans and building construction plans while various lease negotiations were carried out with MGS.

Instrument Repair and Test Shop

Personnel operated the only facilities in the ministry for repairing, calibrating and environmentally testing highly specialized and very precise engineering instruments such as theodolites reading directly to one second of arc, first and second order levels, other miscellaneous survey equipment, traffic counting recorders, solid state timers, detectors, transceivers, decoders, 170 microprocessors, monitors, switch packs, isolators, relays and other miscellaneous electronic equipment pertaining to traffic signals control.

They were also responsible for the repairs and the acquiring of new transceivers (walkie-talkies); for acceptance testing all the 170 microprocessor equipment for controlling traffic signals in the ministry, including software and hardware; to all region, districts and head office. A charge back system was implemented with recoveries of approximately $180,000.00.

Special Services Operations

Personnel of postal operations was responsible for incoming and outgoing mail handling, Purolator Courier mail service to all regional and district offices and the use of Priority Post Courrier. They were also responsible for teletype centre activities, as well as the operation of the mailmobile service throughout the Downsview complex.

Volumes of mail reached were: outgoing mail 1,556,124; incoming mail 2,701,617; teletype messages 195,197.

Material Control personnel were responsible for handling moves and office realignments, delivery of supplies, furniture and equipment etc., processing orders and invoices, arranging for furniture and equipment repairs on a call-as-needed basis. In addition, they provided expertise in the selection of appropriate types of furniture and equipment for client offices.

Volumes included: moving realignments — by contract mover, 43; by staff, 90.

Receiving/distribution included: shipments received: 7,743; pieces processed: 48,194; orders processed: 998; service calls: 2,658; and invoices processed: 3,207.

Telecommunications Services Section

Projects undertaken included the completion of the Sault Ste. Marie radio system with a total cost for the system approaching $1,000,000. Savings of more than $50,000 in the development were achieved by the use of multicoupler devices permitting the use of a single antenna at most of the repeater tower sites.

Mobile radio system design work and specifications were largely completed for Ottawa and Kingston district replacement radio systems with total costs for both systems in the order of $855,000.

Staff and the Ministry of Environment discussed the joint use, on a limited basis, of the MTC radio systems throughout the province and a provisional agreement was reached with regard to the number of mobile radio units which MTC would permit to be added to the systems and the type and volume of traffic to be handled. The number of MoE mobile radio units wes limited to 120.

Estimated savings in the joint use of the MTC radio systems with MoE will be approximately $7,000,000 based on the cost of the MoE installing a province-wide system of their own.

In the field of telephone communications, the systems designed to accommodate the move of drivers and vehicles operations to Kingston were completed. This work included the provision of data, telephone services and a "hot line" centre at 118 Princess St., Kingston.

The use of the "hot line" centre resulted in savings of $20,000 per month over a period of five months.

Analysis of the automated call sequencing equipment in driver control, driver licensing and Downsview road information office determined that a savings of more than 50 man-years was achieved over the last five years since the introduction of the equipment.

A new telephone switchboard and system was installed in Owen Sound district office utilizing the Mitel 200 switch.

Four digital voice-recording-and-answering telephone machines were installed to improve road report information to the general public in the areas of Peterborough, Sarnia, St. Catharines and Barrie and to economize in the use of WATS lines which were heavily used in these areas for contact with regional offices for road information.

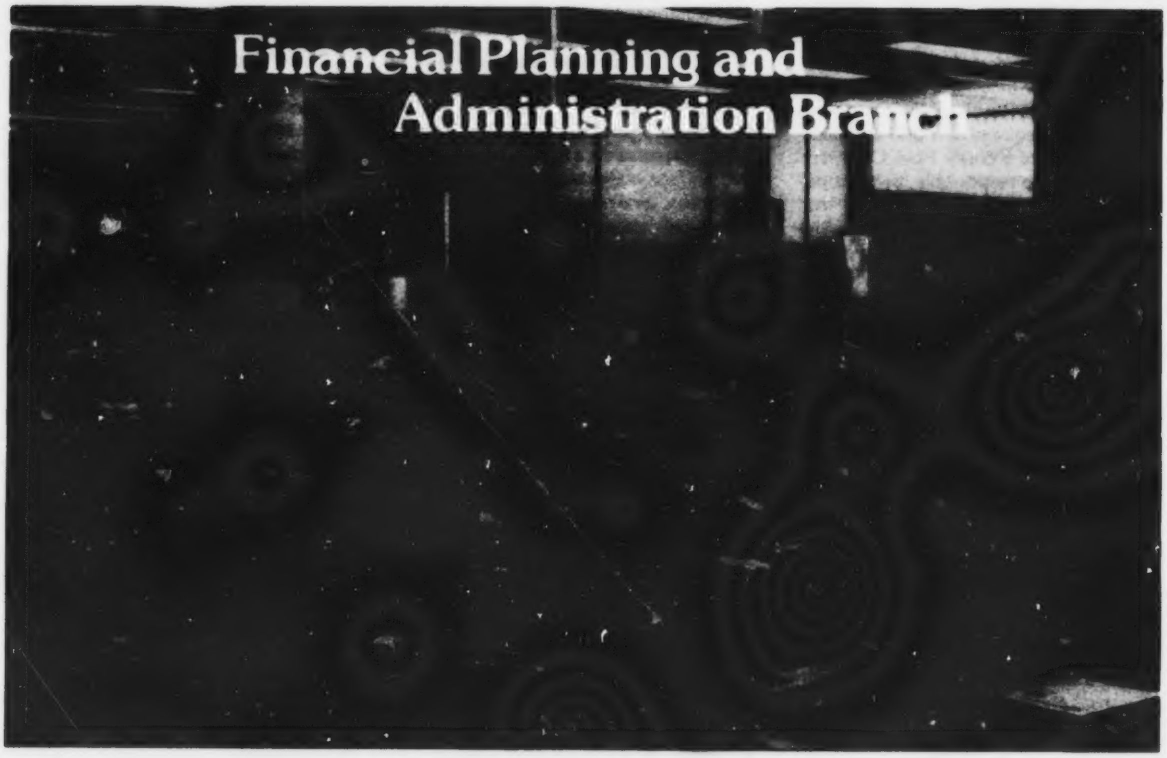
Telecommunications staff were involved with MGS in a telephone study encompassing Metro Toronto and vicinity with a view to the installation of a digital telephone switch, or switches, to serve Ontario Government ministries. It was nearing completion by the end of March.

Progress was made in the investigation of alternative methods in the receipt and transmission of traffic presently handled by teletype. The most promising in terms of economy and function was the use of fairly simple terminals working into the electronic office services offerings of CN-CP Telecommunications.

Telephone system changes were carried out at ministry offices province-wide, mostly due to organizational and personnel changes. The bulk took place in the Downsview and Queen's Park areas.

The use of teleconferencing showed a steady but modest increase with an average of 13 per month.

Financial Planning and Administration Branch



Chief Accountant's Office

Staff was responsible for all functions usually associated with a large accounting organization: payroll, accounts payable and receivable, maintenance of financial records, preparation of financial statements and liaising with the Ministry of Treasury & Economics.

There were three key areas:

Expenditure Office

Staff developed operational policies and procedures related to accounts payable, expense accounts, payroll and subsidies. It maintained and utilized procedures for the issuing and distributing of payroll cheques, processing of accounts payable data for the issuing of treasury cheques and provision of expenditure information.

Personnel monitored and coordinated policies, procedures and budgets in relation to employee relocation entitlements.

Personnel also monitored expense account data to ensure compliance with regulations and the provision of statistical information.

Revenue Control Office

Staff developed operational policies and procedures related to revenue accounting and cost sharing.

They processed and recorded accounts receivable data and reconciled the concentrator account for all local payments and advances with treasury.

They deposited all revenue received to the consolidated revenue fund and all refund of expenditure to treasury.

Personnel also reconciled all monies deposited in the direct deposit system by drivers and vehicles agents and established accounts receivables for shareable agreements made by the ministry, compiled, prepared and distributed all statistical financial documents and produced and coordinated the daily operations of all financial and statistical reports.

Accounting and Administration (Head Office)

Staff provided a regional accounting function for all head office cost centres and MTC agencies as well as the Ministry of Northern Affairs (MNS).

Budgetary Planning and Control Office

Personnel were responsible for acting as a liaison with Management Board of Cabinet, Ministry of Treasury and Economics, other central agencies and planning, evaluating, developing, controlling and analysing MTC's budget which consists of three sections:

Section staff were primarily involved in acquisition of resources to produce MTC's annual expenditure budget. They coordinated preparation of the expenditure and revenue estimates submission, represented the ministry throughout the resources allocation process and developed MTC's request for personnel and financial requirements in the ensuing fiscal year.

Analysis staff monitored expenditures and revenues, identified deviations and developed financial options for resolution. They also provided support to program managers in the in-year management of financial resources.

Evaluation personnel coordinated integration of the MBR concept with MTC's existing management processes.

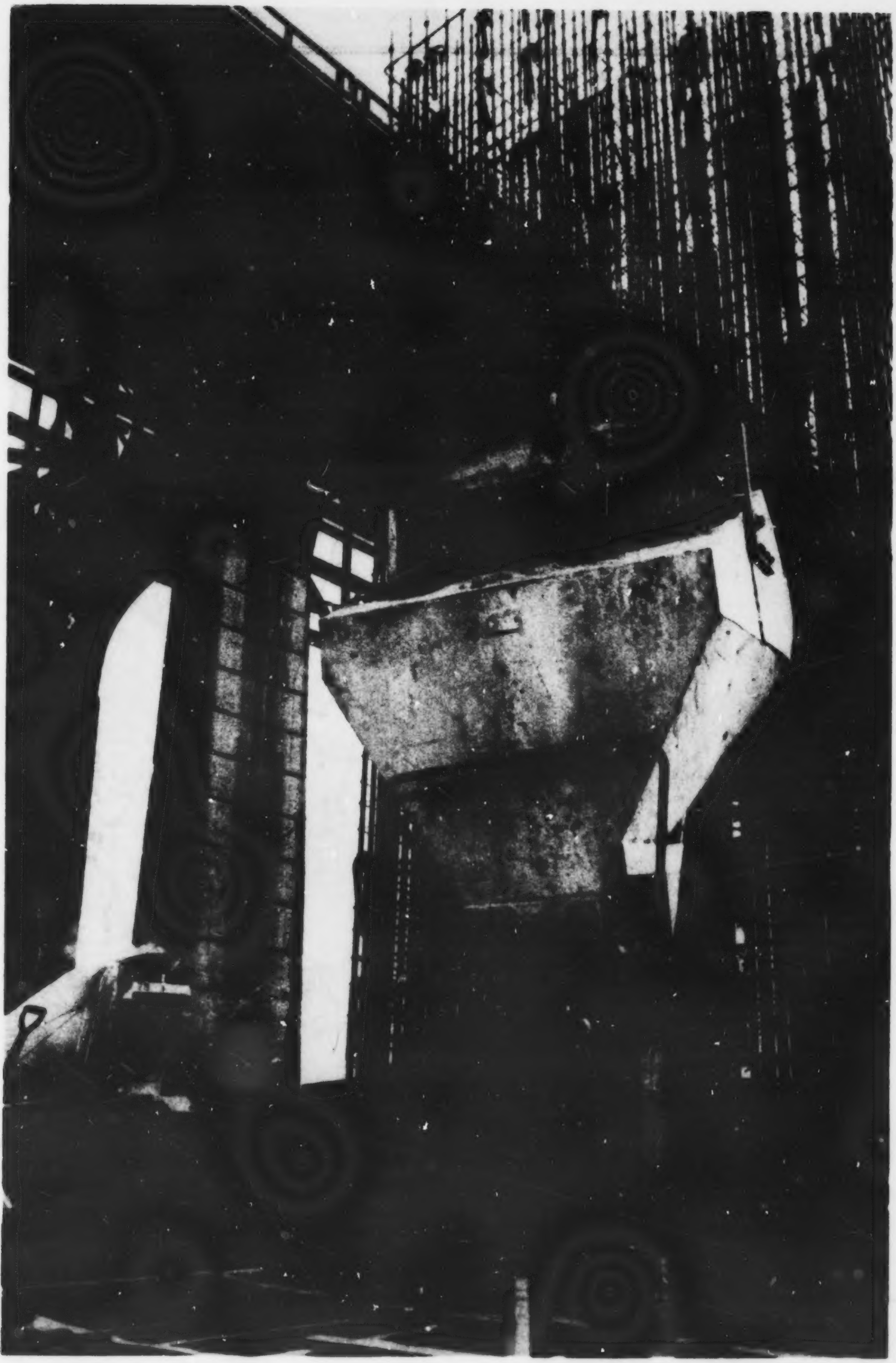
Financial Systems Office

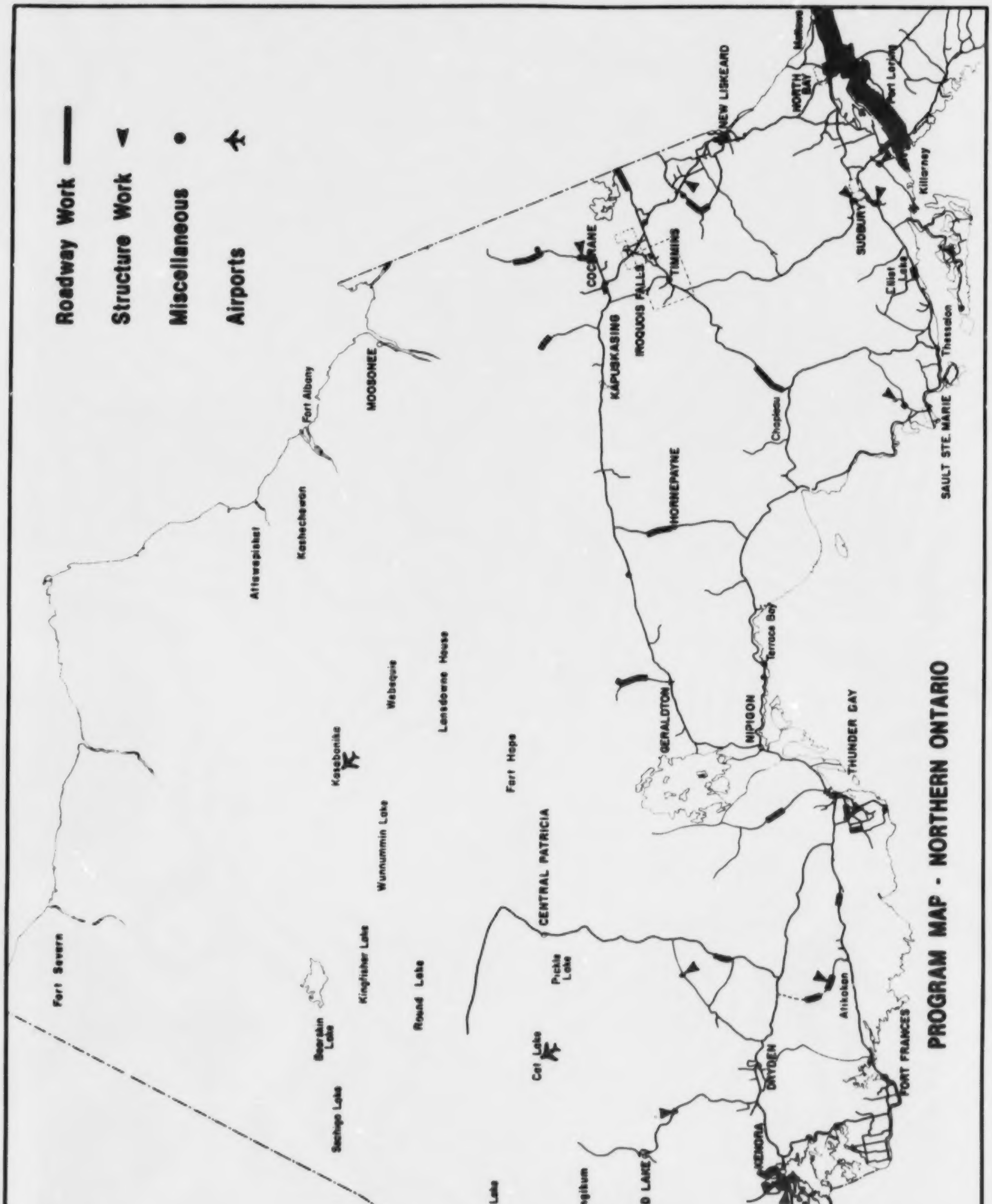
Personnel provided expertise in both computer and manual financial systems processes to aid managers in the effective management of financial resources. They were responsible for the introduction and upgrading of financial systems while continuing to maintain a high degree of efficiency within current systems.

This provided financial analysis and evaluation for in-year monitoring and control, performance assessment, financial information and reporting for managers.

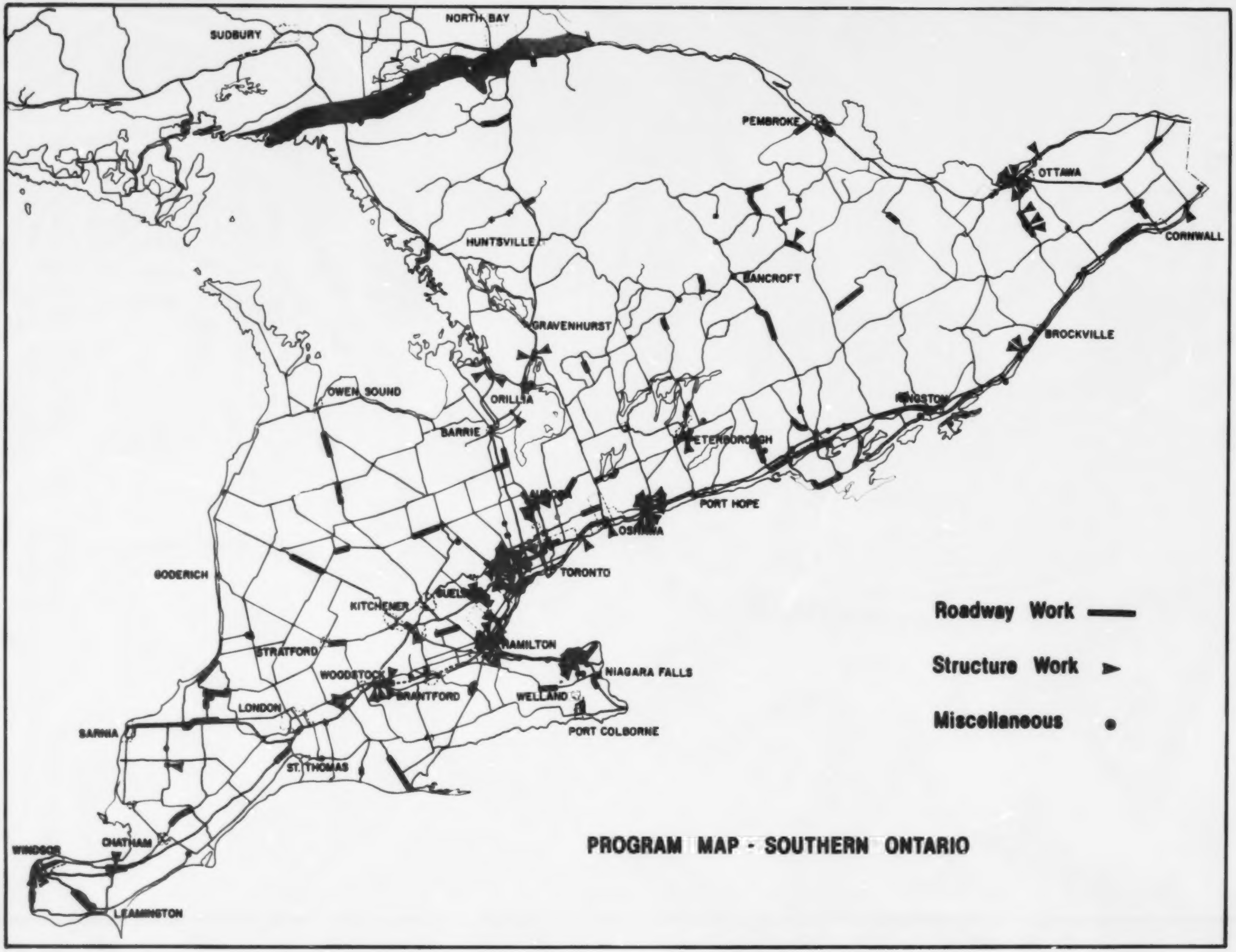
Qualification Control Office

Staff maintained and used procedures to ascertain contractors' abilities to meet ministry pre-qualification standards, initiating, developing and implementing improvements in the pre-qualification process. There are now in excess of 360 contractors qualified with the ministry.



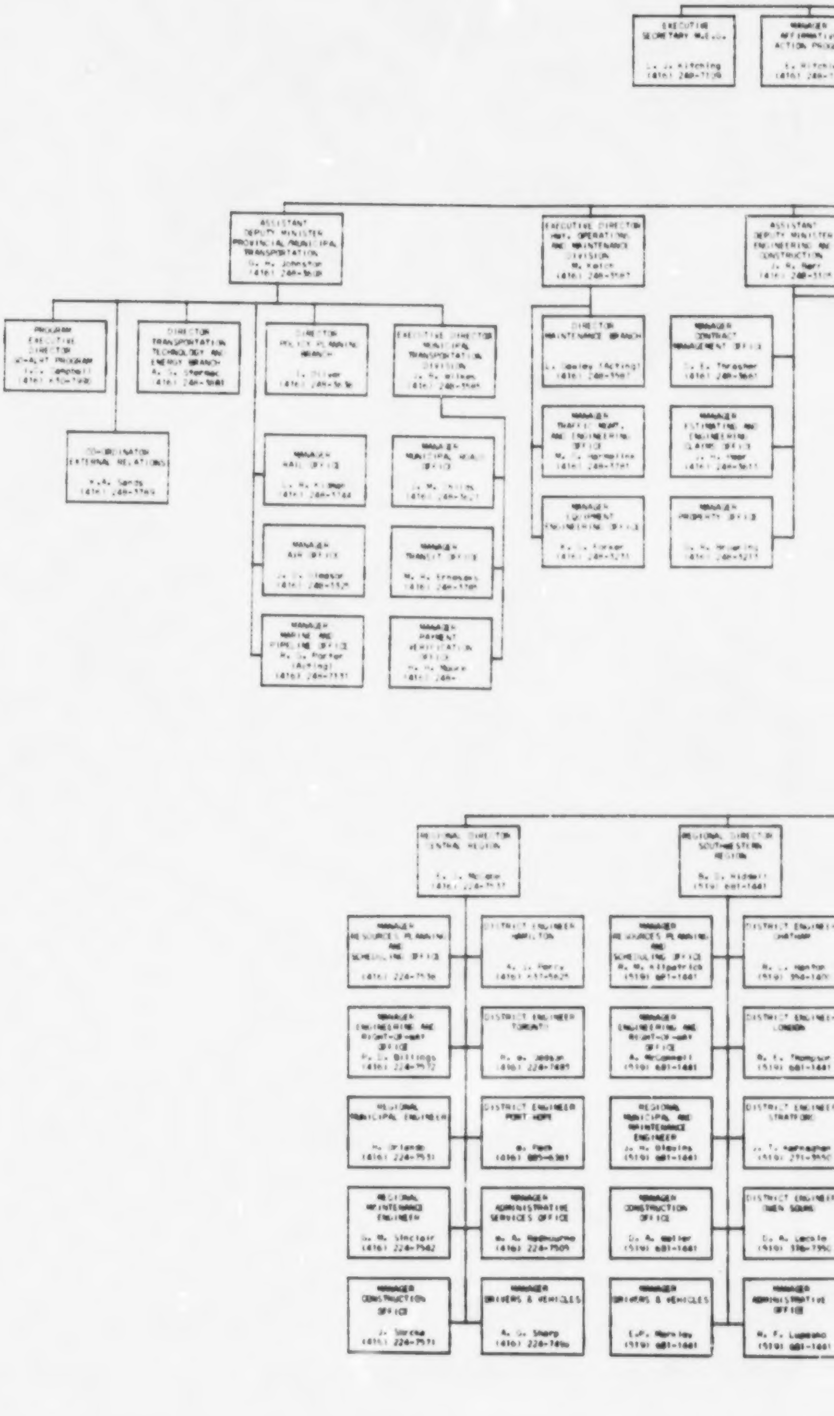

Roadway Work
Structure Work
Miscellaneous
Airports
Fort Severn
Attawapiskat
Kashechewan
Fort Albany
MOOSONEE
Deer Lake
Sachigo Lake
Bearskin Lake
Kingfisher Lake
Wunnummin Lake
Kasabonika
Webequie
Lansdowne House
Fort Hope
Round Lake
Pikangikum
Cat Lake
Pickle Lake
CENTRAL PATRICIA
RED LAKE
KENORA
DRYDEN
FORT FRANCES
Atikokan
THUNDER BAY
NIPIGON
GERALDTON
Terrace Bay
HORNEPAYNE
KAPUSKASING
IROQUOIS FALLS
COCHRANE
TIMMINS
NEW LISKEARD
NORTH BAY
Mattawa
Port Loring
Killarney
SUDBURY
Elliot Lake
Thessalon
SAULT STE. MARIE
Chapleau

PROGRAM MAP - NORTHERN ONTARIO


SUDBURY
NORTH BAY
PEMBROKE
OTTAWA
CORNWALL
HUNTSVILLE
BANCROFT
GRAVENHURST
BROCKVILLE
OWEN SOUND
ORILLIA
KINGSTON
BARRIE
PETERBOROUGH
AURORA
PORT HOPE
OSHAWA
GODERICH
TORONTO
KITCHENER
GUELPH
HAMILTON
STRATFORD
WOODSTOCK
NIAGARA FALLS
BRANTFORD
WELLAND
LONDON
PORT COLBORNE
SARNIA
ST. THOMAS
WINDSOR
CHATHAM
LEAMINGTON
Roadway Work
Structure Work
Miscellaneous

PROGRAM MAP - SOUTHERN ONTARIO

Ministry of
Transportation and
Communications
Ontario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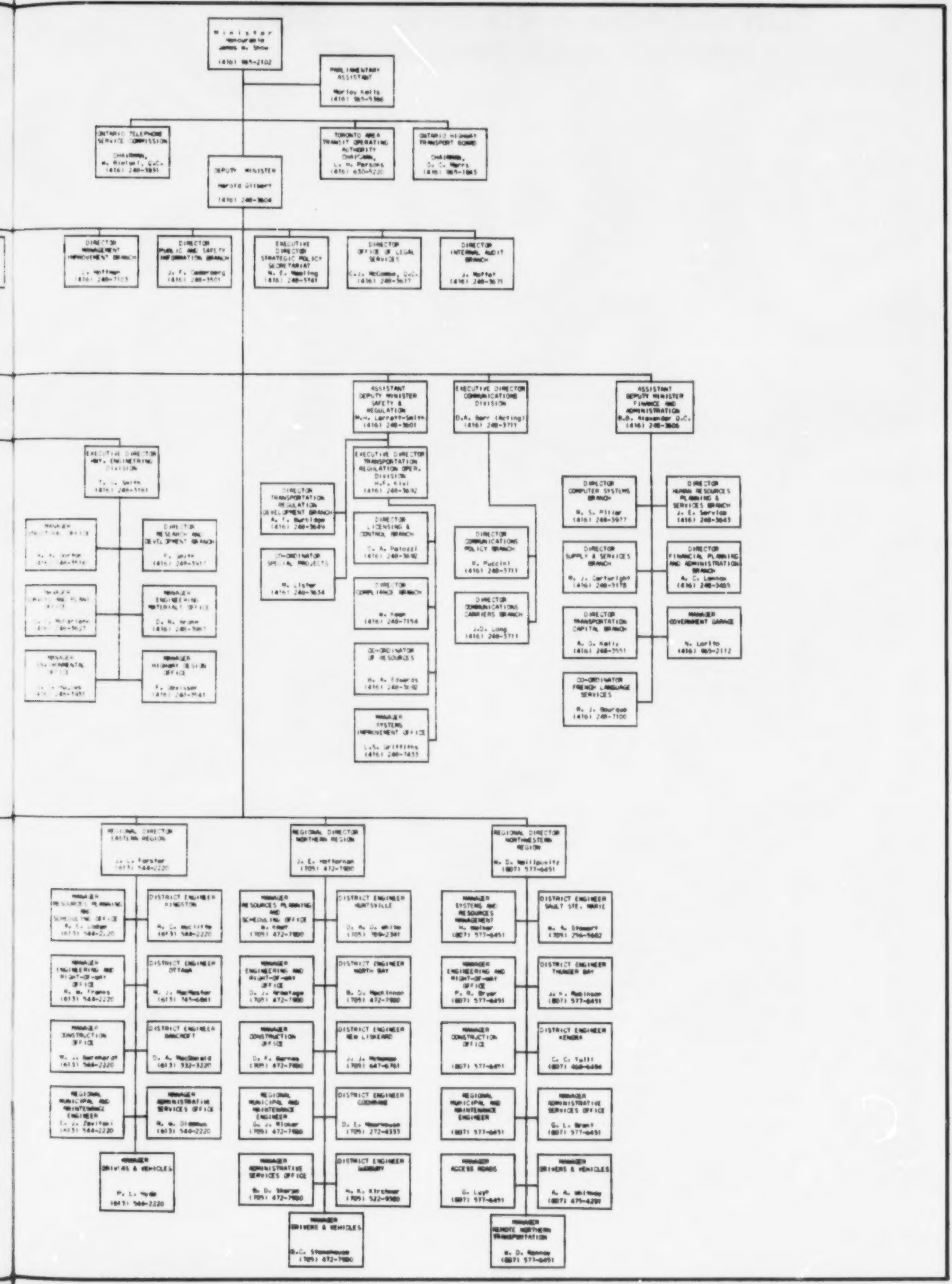
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REGIONAL DIRECTOR NORTHWESTERN REGION W. D. Mellipovitz (807) 577-6451
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MANAGER ACCESS ROADS G. Luyt (807) 577-6451
MANAGER DRIVERS & VEHICLES A. A. Whitney (807) 475-4281
MANAGER REMOTE NORTHERN TRANSPORTATION W. D. Rennie (807) 577-6451

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1982	1983
7	Fail to register a vehicle	5,460	28,242
9(1)	False statement	59	101
9(2)	Fail to notify new address	2,363	2,376
10	Fail to have number plates	14,623	3,593
12	Violations as to number plates	2,188	2,343
13	Improper use of number plates	837	929
18(1)	No driver's licence or improper class	20,316	17,590
18(3)	Driving in breach of condition	1,053	2,164
19	Fail to produce operator's licence	26,026	24,555
21(1) a,b,c,d,e	Driver licence violation	620	581
22	Driver suspended in Ontario — Licence out-of-Province	26	14
23	Operation of motor vehicle by person under 16	117	12
24	Driving motor assisted bicycle under 16	0	0
30(2)	Unlawful possession of permit	4	5
30(3)	Unlawful possession of licence	135	136
35	Driving while licence is suspended H.T.A.	10,118	12,761
41	No garage licence	0	72
42	Record of wrecked vehicle violation	5	12
44	Improper light violations	12,639	12,666
46	Defective brakes	1,591	1,822
48	Faulty equipment (mirror, windshield, etc.)	531	450
52(1)	Defective — improper tires	68	1,204
52(2)	Improper attachment on wheels	7	10
55(1) a & b	Driver view obstructed	188	183
55(2)	Colour-coating obstructing view	152	99
55(3)	Obscured interior colour-coated windows	406	336
56(1) a & b	Windows obstructed	1,307	1,215
57	Excessive noise/smoke/fumes	15,112	12,814
58	No slow-moving-vehicle signs	75	74
61(2)	Radar warning device prohibited	731	630
62	Fail to have proper trailer attachments	1,033	1,104
65(2)	Unsafe vehicle	5	2
65(3)	Failing to submit to vehicle inspection	1,276	1,239
67	Drive unsafe vehicle	2,944	2,454
68(1)	Operate vehicle — fail to display device	847	698
69	Affix vehicle inspection sticker not MTC issue	4	4
71	Certificate of mechanical fitness violation	30	5
87	No name of owner on commercial vehicle	1,040	481
88	Drive/ride motorcycle no safety helmet	1,861	1,340
90(2)	Remove/modify/inoperative seat belt assembly	1,194	1,298
90(3)	Failure/improper use seat belt assembly — driver	74,583	85,646
90(4)	Passenger — failure to ensure seat belt use	6,159	6,540
90(6)	Driver — failure to ensure passenger seat belt use	841	2,447
92(1)(2)(5)(6)(9)(10)	Excessive vehicle width/length/height	1,748	1,268
93(7)	Special permit violation	471	403
93(1)	Overload in excess of permit	8	5
93(2)	Fail to produce commercial ownership permit	27	8
93(4)	Spring Regulations — Overload	10	0
94(1 & 2)	Overhanging load/improper loading	2,004	2,049
98(1) (1b)	Overweight — tires	91	6
99(1)a	Overweight — Single axle (single tire)	45	42
99(1)b	Overweight — Single axle (dual tires)	1,806	1,194
99(1)c	Overweight — Dual axle	7,237	5,337
99(1)d	Overweight — Triple axle	203	164
99(2)	Overweight — Dual axle (single tire)	3	4
99(3)	Overweight — Triple axle (single tire)	30	1
99(4)	Overweight — Single front axle (no verification)	126	35
99(6)	Overweight — Single front axle (exceed rating)	26	14

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1982	1983
100(a)	Overweight — Two axle group	79	68
100(b)	Overweight — Three axle group	175	102
100(c)	Overweight — Four axle group	21	43
101(1) (abc)	Gross vehicle overweight	2,094	1,622
101(2)(3)	Fail to produce/violate authority	12	16
102(3)	Overweight during freeze-up	151	318
103	Overweight on axle Class B highway	7	14
104(1)	Overweight in excess of permit	4,094	3,056
104(2)(5)	Fail to carry/produce permit	1,647	229
104(7)(8)	Overweight — March/April	0	3
109	Speeding 50 km/h or more over the limit	8,464	3,498
109	Speeding more than 29 less than 50 km/h	82,276	81,276
109	Speeding more than 15 less than 30 km/h	263,688	250,193
109	Speeding under 16 km/h	420,863	419,590
111	Careless driving	17,839	17,003
113	Unnecessary slow driving	186	146
114	Fail to obey signal of police officer	270	226
114(3)	Drive vehicle on closed road	217	181
115	Fail to yield right of way	129	178
116	Fail to stop at through highway	56,946	55,537
118	Fail to obey yield sign	586	584
119	Fail to yield — from private road	6,995	6,580
120	Pedestrian crossover violation by driver	4,372	4,195
121(1)	Improper right turn	40	9
121(2)	Improper right turn at intersection	2,619	3,031
121(3)	Improper right turn — multi lane	3,418	348
121(4)	Improper left turn — across path of approaching vehicle	4,562	5,589
121(5)	Improper left turn at intersection	3,723	5,960
121(6)	Improper left turn — multi lane highway	1,469	900
122(1)	Fail to signal for turn	13,606	14,127
122(2)	Fail to signal-moving from parked position	3,639	3,905
122(4a)(4b)	Improper manual signal	9	5
122(5)	Improper directional signal	37	35
122(6)	Improper use of signaling device	73	71
122(7)(7a)(7b)	Fail to signal	135	114
123	Prohibited U-turns	182	159
124(5)	Disobey red signal light	50,708	48,122
124(7)	Disobey amber light	11,855	9,516
124(8)(9)(10)(11)	Flashing red-amber-green arrow	2,946	2,483
124(12)	Fail to give right-of-way to pedestrian	922	922
124(13)	Prohibited turn	29,583	26,679
124(25)	Disobey traffic signal	5	1
125(3)	Disobey portable lane control signal — red light	94	61
125(4)	Disobey portable lane control signal — amber light	39	34
126	Drive right side of multi-lane highway	227	173
127(1)(2)	Fail to share the road	2,183	1,915
127(3)	Fail to move to right	194	138
127(4)	Vehicle or horsemen overtaking others	461	443
127(5)	Horsemen or vehicles overtaking bicycles or tricycles	50	51
127(6)	Improper passing	38	16
127(7)(a)(b)	Improper passing	1,093	1,125
128	Driving left of centre of highway	1,498	1,292
129(1)	Passing to right of vehicle	69	89
129(2)	Unsafe passing to the right	3,012	3,227
130(1)	Fail to obey signs posted on paved shoulder	932	551
132	Wrong way on a one-way street	6,194	5,619
133(a)	Unsafe lane change	5,734	6,134
133(b)	Drive in centre lane of three lane highway	161	169

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1982	1983
133(c)	Fail to drive in slow moving traffic lane	4,473	4,695
135(a)(b)	Improper driving on divided highway	643	648
135(a)	Backing on highway	604	182
136(1)	Following too closely	15,236	16,021
136(2)	Following too closely in commercial vehicle	386	315
137(1)	Fail to yield to fire department vehicle, etc.	360	280
137(2)	Following a fire department vehicle	15	15
140	Crowding driver	743	421
141	Fail to stop for crossing (signal)	161	183
142	Drive through under or around railway barrier	190	182
143	Improper opening of vehicle door	279	233
144(1)	Improper approach or passing a stopped streetcar	147	168
144(2)	Pass streetcar on left side	34	38
145	Improper driving when approaching animals	2	25
146	Fail to use passing beam	887	987
147	Improper parking on highway	675	546
147(8)	Nc warning lights on commercial vehicle	22	11
147(9)	No flares	55	117
147(10)	Vehicle interfering with traffic	593	486
148	Racing	112	66
150(b)	Failure to stop school bus or public vehicle at railway crossing	26	18
151(5)(5a)(5b)	Fail to stop for school bus	2,715	1,702
151(6)	School bus: Fail to actuate signals	20	21
151(9)	Unlawful use of red signal lights on school bus	7	4
151(11)	School bus: Failure to cover signals and signs	21	14
152(3)	Fail to obey school crossing stop sign	119	66
156	Littering highway	1,175	895
158(2)	Disobey legal sign	226	4,567
159(2)	Fail to obey a direction sign	4,222	36
173	Fail to report an accident	4,144	4,117
174	Fail to remain at the scene of an accident	2,927	2,576
175	Fail to report damage to highway property	698	657
189(a)	Fail to stop for police	631	808
	Others	17,059	1,786
	TOTAL	**1,304,637**	**1,271,334**

SUMMARY OF CONVICTIONS

	1982	1983
Criminal Code	48,663	47,966
Highway Traffic Act	1,304,637	1,271,334
Regulation H.T.A.	10,456	5,208
Municipal Bylaws	27,469	31,210
Motor Vehicle Accident Claims Act	6	0
Compulsory Automobile Insurance Act	21,444	20,482
Public Commercial Vehicles Act	2,387	600
Public Vehicle Act	25	0
Motor Vehicle Transport Act	1,027	624
TOTAL	**1,416,114**	**1,377,424**

REGULATIONS UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1982	1983
484	School bus violation	40	19
469(14)(15)(16)(17)	Number plate violation	2,416	395
462(4)	Motorcycle violation	326	195
462(13)	Classified licence violation	475	34
462(19)	Fail to notify name/address change	2,318	1,958
462(20)	Fail to sign licence	844	683
469(21)	Only single beam headlight	10	11
477(4)	Improper parking	414	109
494(2)	Prohibited use of studded tire	158	52
	Others	3,455	1,752
	TOTAL	**10,456**	**5,208**

CONVICTIONS REGISTERED UNDER THE CRIMINAL CODE (CANADA)

SECTION	OFFENCES	1982	1983
203	Criminal negligence causing death	17	15
204	Criminal negligence causing bodily harm	9	10
233(1)	Criminal negligence	122	145
233(2)	Fail to remain	1,740	1,466
233(4)	Dangerous driving	1,435	1,326
234	Drive ability impaired	19,769	19,321
234.1	Roadside	524	668
235(2)	Fail to take breathalyzer	3,387	3,551
236	Over .08 alcohol	21,660	21,464
	TOTAL	**48,663**	**47,966**

CONVICTIONS REGISTERED UNDER THE MOTORIZED SNOW VEHICLES ACT

SECTION	OFFENCES	1982	1983
2(1)	Drive or permit to drive unregistered vehicle	297	220
2(2)	Fail to register vehicle	0	0
2(3)	Fail to provide evidence of issue of permit (no plate)	3	3
2(7)	Fail to display registration number	218	129
2(8)	Fail to display evidence of permit	420	376
3(1)	Make false statement	1	0
3(2)	Fail to notify change of address	3	0
3(3)	Fail to notify change of ownership	35	14
4	(Plate) — Registration number obstructed	2	3
4(2)(a)(b)	Use defaced or altered plates	0	0
4(2)(c)	Improper plates	0	0
5	Drive on prohibited highway	90	65
6(2)	Drive in area not designated	0	0
7	Improper crossing of Highway	8	5
8(1)(2)	No operator's licence driving along/across Highway	165	102
11(1)	Operate/permit operation uninsured vehicle	270	197
11(2)	No insurance	11	13
11(3)	Fail to produce evidence of insurance	61	38
11(4)	Produce false evidence of insurance	0	2
12(1)	Fail to report collison	26	13
12(2)	Police officer fail to forward report of accident	0	0
13(1)	Speeding	44	29
14	Careless driving	61	39
15(1)	Fail to produce licence	68	65
16	Remove device	2	3
16(1)	Improper muffler	0	1
17	Towing on serviced roadway prohibited	2	8
18	No helmet	208	215
25(3)	Disobey signs on highway or public trail	38	11
	Others	41	8
	TOTAL	**2,074**	**1,559**

REGULATIONS (MOTORIZED SNOW VEHICLES ACT)

SECTION	OFFENCES	1982	1983
2	Disobey police officer	12	5
3	Fail to yield to vehicle on right	3	1
4	Disobey sign	8	5
5(1)(b)	Fail to yield — from adjoining property	5	1
5(2)	Improper crossing of roadway	0	0
6(3)	Improper left turn	0	1
7(1)	Fail to signal	2	0
7(2)	Fail to signal from stop position	2	0
7(3)	Improper signal	0	0
7(4)	Fail to signal stop	0	0

REGULATIONS (MOTORIZED SNOW VEHICLES ACT)

8(a)	U-turn no clear view	1	0
8(b)	U-turn railway crossing	0	0
8(c)	U-turn on hill no clear view	0	0
9	Disobey traffic signal light	3	0
10(1)	Fail to share roadway	8	1
10(2)(b)	Passing when roadway not clear	0	0
11	Drive left of centre	0	1
12	Pass on right — not in safety	2	1
13	Following too closely	2	1
14(1)	Fail to stop at railway crossing	0	0
14(2)	Cross railway improperly	0	0
15(1)(a)	Park on roadway	0	0
16	Speeding	0	0
17	Improper or no lights	31	17
19(a)	Drive on Kings Highway (prohibited)	0	0
	Others	0	24
	TOTAL	**79**	**58**

CRIMINAL CODE OF CANADA (MOTORIZED SNOW VEHICLES)

SECTION	OFFENCES	1982	1983
233(2)	Fail to remain	0	0
233(4)	Dangerous driving	0	0
234	Impaired Driving	9	5
235(2)	Fail to take breathalizer	1	0
236	Over .08 alcohol	3	9
	TOTAL	**13**	**14**

MUNICIPAL BYLAWS (MOTORIZED SNOW VEHICLES)

SUMMARY OF CONVICTIONS (MOTORIZED SNOW VEHICLES)

Motorized Snow Vehicles Act	2,074	1,559
Criminal Code of Canada	13	14
Regulations	79	58
Bylaws	0	0
TOTAL	**2,166**	**1,631**

SUSPENSIONS

COURT ORDERED SUSPENSIONS H.T.A.	**1982**	**1983**
Careless driving	329	331
Speeding over 30 mph (50 kmh)	237	207
Racing	13	6
Fail to remain	123	91
Others	259	455
TOTAL	**961**	**1,090**
MANDATORY SUSPENSIONS H.T.A.		
Drive while licence is suspended (Section 35)	9,013	12,602
Others	0	0
TOTAL	**9,013**	**12,602**
DEMERIT POINT SYSTEM SUSPENSIONS		
6 & 15 demerit point accumulation	13,019	19,565
Fail to attend interview	912	916
As a result of interview	1,121	1,551
TOTAL	**15,052**	**22,032**
DISCRETIONARY SUSPENSIONS (H.T.A. – SECTION 30)		
Medical or physical condition	812	1,035
Fail to file medical report	2,234	2,360
TOTAL	**3,046**	**3,395**

SUSPENSIONS

SUSPENSION FOR:		
Motor Vehicle Accident Claims	1,410	4,316
Failure to pay judgment	1,171	1,384
Default in payment of traffic fine	76,507	63,657
TOTAL	**79,088**	**69,357**
MANDATORY SUSPENSION H.T.A. FOR CRIMINAL CODE OFFENCES		
Criminal negligence	147	154
Dangerous driving	1,424	1,198
Impaired	19,495	18,816
Failure to provide breath sample	3,347	3,408
Blood/alcohol .08	21,269	20,832
Fail to remain at scene	1,752	1,385
Fail to provide (RDSI)	500	627
TOTAL	**47,936**	**46,420**
TOTAL OF ALL SUSPENSIONS	**155,096**	**154,896**

DEMERIT POINT SYSTEM	**1982**	**1983**
DRIVER IMPROVEMENT ACTIONS		
Advisory letters issued (Probationary)		44,238
(Non Probationary)	129,104*	125,390
Interviews conducted	37,016	29,635

SUSPENSIONS

SUSPENSIONS		
Drivers who reached suspension level through point accumulation (15 points)	5,498	5,917
Drivers who reached suspension level through point accumulation (6 points)	6,843	13,078
Drivers who reached suspension level through point accumulation — (Second 15 point accumulation)	678	570
Drivers suspended for failure to attend interview	912	916
Drivers suspended as a result of unsatisfactory interview	1,121	1,551
Total suspensions under point system	15,052	22,032
DRIVER MEDICAL REVIEW		
Total Cases Reviewed	86,782	85,813
Satisfactory	84,709	84,175
Unsatisfactory reports as to class	1,162	479
Totally unsatisfactory	911	1,159
New Medical Waiver Programme (Effective March 1981)		
Waivers Granted	203	221
Waivers Denied	35	16
DRIVER OPTOMETRICAL REVIEW HIGHWAY TRAFFIC ACT		
Total Cases Reviewed	5,824	8,463
Satisfactory vision reports filed	2,697	4,550
Drivers required to wear prescribed lenses while driving — no previous restriction	2,920	3,528
Unsatisfactory vision reports	207	385

*129,104 is Probationary plus Non Probatonary letters issued

Driver Improvement Statistics – 1983 Summary Sheet

	1981	1982	1983
NUMBER OF LICENCE DRIVERS IN ONTARIO	5,123,177	5,247,177	5,380,259
CONVICTIONS RECORDED IN RESPECT TO THE OPERATION OF:			
Motor Vehicles	1,412,202	1,416,084	1,377,424
Motorized Snow Vehicles	1,182	2,165	1,631
TOTAL	**1,413,384**	**1,418,249**	**1,379,055**
TOTAL DRIVER LICENCE APPLIED	**136,539**	**155,096**	**154,896**
MEDICAL AND OPTOMETRICAL REVIEWS CONDUCTED	**93,833**	**92,606**	**94,276**

Trends in Motor Vehicle Accidents

Death and Injury Rates Over the Period 1974-1983

Between 1974 and the end of 1983, Ontario's population and the number of licensed drivers, motor vehicle registrations and motor vehicle accidents (with the exception of the years 1976, 1978, 1980, 1982 and 1983) were all on the rise. During the past ten years, traffic deaths reached a high of 1,800 in 1975 and declined to a low of 1,138 in 1982 which is the lowest annual fatality total since the year 1958 when 1,112 persons were killed.

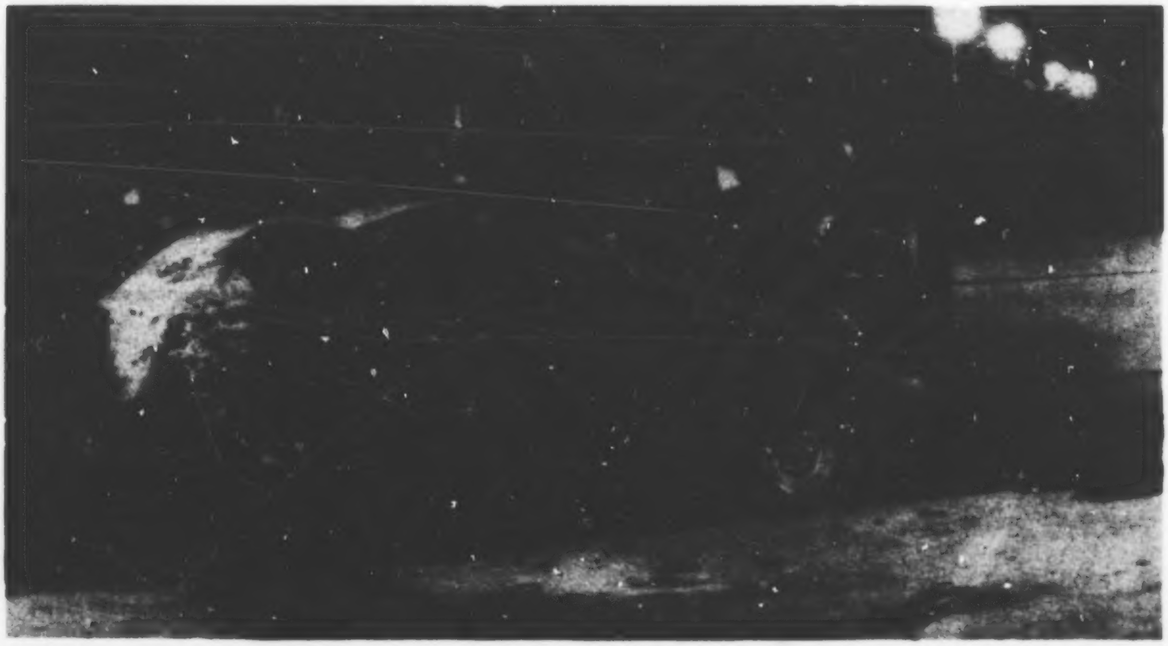
In the past year, the number of deaths increased 5.8% from the 1,138 deaths in 1982 to 1,204 deaths in 1983. The population grew from 8.71 million to 8.82 million. The death rate per 100,000 population increased to 13.7 from 13.1 last year. The death rate over the past ten years ranges from 21.9 to 13.1. The 1982 death rate of 13.1 is the lowest since the year 1944 at which time the population was 3.96 million and the death rate was 12.6 per 100,000 population.

There was a slight decrease in the number of persons injured, from 92,815 in 1982 to 91,706 this year. The 1983 injury rate per 100,000 population decreased to 1040.2 from 1067.0 in 1982.

Last year, the number of motor vehicle accidents reported totalled 181,999 a decrease of 3.2% against the 1982 total of 187,943. there were increases of 4.5% in fatal accidents and 5.8% in persons killed. The personal injury accidents and persons injured decreased 0.4% and 1.2% respectively.

The motor vehicle accident rate per one million kilometres travelled this year remained the same as last year at 2.8 and the fatal accident rate per 100 million kilometres travelled increased from 1.5 to 1.6. The death rate per 100 million kilometres travelled increased from 1.7 in 1982 to 1.8 this year. The 1983 death rate of 1.8 is the second lowest since 1955.

The number of kilometres driven in 1983 was estimated at 65,358,842,000 a decrease of 0.6% from the 1982 figure of 65,750,705,000.



MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
		$	$
2	Lancaster-Windsor	6,171,679	4,468,729
3	Fort Erie—Windsor	2,035,175	2,507,232
4	Port Stanley—(Creemore)	447,287	1,432,887
5	Toronto—Paris	645,517	1,097,024
6	Hwy. 24—Tobermory	3,635,539	2,877,390
7	Ottawa—Sarnia	15,537,928	5,034,369
7A	Hwy. 115—Hwy. 12 (Manchester)	3,047,389	304,064
7B	Peterborough—Chemung Corners	14,908	93,601
8	Winona—Goderich	1,787,360	871,850
9	Hwy. 11—Kincardine	25,000	1,178,229
10	Port Credit—Owen Sound	675,393	1,718,293
11	Toronto—Rainy River	25,751,393	11,121,931
11B	At New Liskeard	50,963	78,586
12	Whitby—Midland (7)	618,122	1,003,320
14	Bloomfield—Marmora	783,731	338,129
15	Kingston—Carleton Place	11,680	629,992
16	Johnstown—Ottawa	4,237,369	454,482
17	Quebec Boundary—Manitoba Boundary	12,363,894	11,088,276
17B	At North Bay	—	6,084
18	Leamington—Windsor	123,771	325,095
19	Port Burwell—Tralee	329,691	683,007
20	Niagara Falls—Hamilton	2,419,805	492,907
21	Hwy. 3 (Morpeth)—Owen Sound	781,923	1,559,674
22	London—Hwy.7	444,476	261,615
23	Hwy. 7—Hwy. 9 Teviotdale	455,434	573,909
24	Hwy. 59—Collingwood	33,894	1,245,417
24A	Paris—Galt	—	48,361
25	Oakville—Hwy. 89	2,186,374	765,323
26	Barrie—Owen Sound	82,151	704,346
27	Toronto—Penetanguishene	2,655,459	1,116,030
28	Port Hope—Bancroft	1,643,558	1,113,041
29	Brockville—Arnprior (15)	10,871	519,503
30	Brighton—Havelock	1,621,244	288,894
31	Morrisburg—Ottawa	204,989	464,555
32	Gananoque—Hwy. 15	1,842	91,504
33	Kingston—Stirling	83,663	630,054
34	Hwy. 2 (Lancaster)—Hawkesbury	56,317	451,302
35	Hwy. 401 (Newcastle)—Dwight	873,260	1,014,986
35A	Fenelon Falls—Hwy. 35	—	19,352
36	Burleigh Falls—(Hwy. 7)	12,100	416,754
37	Belleville—Hwy. 7 (Actinolite)	12,336	211,667
38	Kingston—Hwy. 7 (N. of Sharbot Lake)	8,905	376,005
40	Blenheim—Sarnia	127,291	518,362
41	Napanee—Pembroke	11,985	1,066,710
42	Brockville—Westport (29)	1,291	254,879
43	Alexandria—Perth	3,361	956,242
44	Hwy. 17—Hwy. 29 (Almonte)	—	78,216
45	Cobourg—Norwood	32,904	318,594
46	Hwy. 7 (E. of Manilla)—Bolsover	—	154,123
47	Hwy. 48 (N. of Hwy. 7)—E. of Hwy. 12	—	323,080
48	Toronto—Hwy. 35 (Coboconk)	5,774	1,012,871
49	Picton-Hwy. 401 (W. of Deseronto)	171	114,361
50	Toronto—Hwy. 89	979,478	530,475
51	Rondeau Prov. Park—Jct. Hwy. 3	—	50,865
52	N. of Hwy. 97S—Hwy. 2	10,893	193,502
53	Hamilton—Hwy. 2 (Eastwood)	13,547	385,177
54	Cayuga—Cainsville	39,744	452,526
55	Hwy. 401—Niagara	2,077,169	219,953
56	Jct. Hwy. 3—Jct. Hwys. 53 & 20	—	190,072

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
		$	$
58	Port Colborne—St. Catharines	1,475,290	373,921
58A	Port Colborne (Hwy. 58 to Jct. Hwy. 14)	—	49,137
59	Long Point—Shakespeare	3,147	633,343
60	Hwy. 17 (W. of Renfrew)—Huntsville	53,978	1,340,375
61	International Bdry.—Thunder Bay	181,758	259,781
62	Hwy. 14 (N. of Belleville)—Pembroke	2,654,562	1,254,603
63	North Bay—Quebec Border	1,375,452	372,460
64	Sturgeon Falls—Hwy. 11	84,078	773,309
65	Quebec Border—Matachewan	782,456	565,426
66	Quebec Border—Hwy. 65	1,074,825	476,978
67	Iroquois Falls—Hwy. 101	25,856	136,271
68	Hwy. 17 (Espanola)—S. Baymouth	—	62,972
69	Hwy. 12 (N. of Brechin)—Capreol	1,068,485	1,682,768
69B	Parry Sound	1,439,222	10,931
70	Springmount—Hepworth	—	80,805
71	Fort Frances—Hwy. 17 (E. of Kenora)	47,401	602,083
72	Hwy. 17 (Dinorwic)—Sioux Lookout	—	235,484
73	Port Bruce—Dorchester	15,811	231,522
74	Hwy. 3 (New Sarum)—Nilestown	13,442	123,504
76	Hwy. 3 (Eagle)—Hwy. 2	17,894	92,771
77	Leamington—Hwy. 401 (N. of Comber)	2,445	117,866
78	Hwy. 21 (Dresden)—Wallaceburg	—	96,591
79	Hwy. 2 (Bothwell)—Hwy. 7	68,146	266,576
80	Hwy. 2 (S. of Glencoe)—Courtright	16,646	323,747
81	Delaware—Grand Bend	8,355	364,415
83	Hwy. 23 (Russeldale)—Hwy. 21	—	240,561
84	Hensall—St. Joseph	303,494	100,866
86	Guelph—Amberly	1,290,745	713,944
87	Harriston—Hwy. 86 (Biuevale)	—	196,164
88	Bradford—Hwy. 27 (Bond Head)	861,572	55,958
89	Hwy. 11—Hwy. 23 (E. of Palmerston)	19,889	733,457
90	Barrie—Angus	1,418	149,624
91	Stayner—Duntroon	—	38,909
92	Elmvale—Wasaga Beach	—	74,071
93	Hwy. 11 (E. of Barrie)—Waverley	98,054	417,892
94	Callander—Hwy. 17 (S. of North Bay)	1,401,972	57,087
95	Alexandria Point-Wolfe Island	—	57,316
96	Port Metcalf—W. End of Wolfe Is.	220,264	176,473
97	Hwy. 6 (Freelton)—Hickson	229,639	12,157
99	Dundas—Hwy. 24 (N. of Brantford)	55,933	63,724
100	Jct. Hwy. 401 to London	28,668	22,614
101	Quebec Border—Hwy. 17 (Wawa)	1,805,648	2,055,493
102	Thunder Bay—Sistonens Corners	50,957	153,218
105	Hwy. 17—Red Lake	879,669	588,061
106	Hwy. 28 (Dale)—Hwy,. 2 (Welcome)	—	25,571
108	Hwy. 17—Hwy. 639 (Quirke Lake)	46,990	235,062
112	Hwy. 11—Hwy. 66 (Swastika)	208,518	85,873
115	Newcastle—Peterborough	120,195	354,336
117	Jct. Hwy. 11—Jct. 35	10,676	222,451
118	Hwy. 11—Hwy. 169	276,369	563,284
121	Hwy. 28—Hwy. 35 (S. of Fenelon Falls)	163,711	737,504
124	Sundridge—Parry Sound	12,085	390,926
125	Hwy. 105—Red Lake	—	43,009
126	Hwy. 401—Hwy. 2 (London)	—	76,629
127	Maynooth-Hwy. 60 (E. of Whitney)	80,629	188,230
129	Thessalon—Chapleau	2,902,425	1,068,329
130	Port Arthur—Hwy. 61	17,418	70,834
132	Renfrew—Hwy. 41	—	139,338
133	Hwy. 33 (Millhaven)—Hwy. 401	484,355	51,357
134	Jct. Hwy. 7—Jct. Hwy. 28 (Lakefield)	1,625	92,870
135	Hwy. 401—Hwy. 2 (London)	112,249	38,003
136	Hwy. 24—Orangeville	—	210,759
137	Hwy. 401—Thousand Islands Bridge	183,031	32,544

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
		$	$
138	Cornwall—Monkland	1,048,092	216,871
140	Hwy. 3 (Port Colborne)—Hwy. 20	273,855	119,210
141	Hayes Corners Hwy. 69—Jct. Hwy. 11	167,520	258,836
144	Sudbury—Hwy. 101	5,052,319	1,583,249
169	Jct. Hwy. 12 to Jct. Hwy. 69	165,139	293,882
400	Toronto—Hwy. 12 (Coldwater)	3,395,870	3,565,830
401	(MCF) Quebec Border-Windsor	38,223,529	16,754,595
402	Hwy. 7—Blue Water	1,479,427	1,012,063
403	Burlington—Brantford	13,463,222	1,622,831
404	Toronto—Hwys. 7 & 12	5,063,271	505,461
405	QEW—International Br. (Queenston)	—	202,411
406	Hwys. 20-58—QEW	7,959,576	250,348
407	Jct. Hwy. 401 to Jct. Hwys. 35 & 115	2,468	—
409	Belfield Expressway Hwy. 401—International Airport	—	475,166
410	Hwy. 401—Jct. Hwy. 7 & 10	5,039,180	183,715
416	Jct. Hwy. 2—Johnstown to Ottawa	35,011	—
417	Quebec Boundary—Ottawa	5,458,085	2,529,003
420	QEW—Rainbow Bridge (Niagara Falls)	33,268	122,893
427	QEW—Hwy. 401	5,782,783	983,200
451	(QEW) Toronto—Fort Erie	46,086,166	7,350,545
456	Dundas St. (Toronto)	—	4,167
	TOTAL KING'S HIGHWAYS	**256,192,226**	**125,594,199**

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
		$	$
500	Hwy. 41 (Dengbigh)—Bancroft	2,462,389	—
502	Dryden—Hwy. 17	95,985	617,653
503	Tory Hill—Kirkfield	42,971	707,603
504	Hwy. 620—Apsley	125	125,160
505	Hwy. 46—Uphill	254,840	115,420
506	Plevna—Hwy. 41	461,528	166,717
507	Hwy. 28 (Lakefield—Hwy. 503	1,831,536	324,604
508	Burnstown—Black Donald Mines	2,825	144,220
509	Hwy. 7—Snow Road Station	1,206	263,291
510	Magnetawan—Hwy. 124	—	15,851
511	Brightside—Hwy. 508	1,777,483	380,877
512	Eganville—Hwy. 60	63,504	231,254
513	Hwy. 132—E. of Hyndford	—	78,715
514	Hwy. 500—Hwy. 515	—	65,512
515	Hwy. 512—Combermere	1,033,423	220,499
516	Windamere to Port Sydney (Marchington Lake Road)	—	242,904
517	Twp. Road (near New Carlow)—Hwy. 62	250	74,803
518	Sand Lake—Hwy. 69	355,105	448,836
519	Hwy. 121—Redstone Lake	127,620	166,727
520	Burk's Falls—Ardberg	5,487	323,852
522	Hwy. 11—West of Loring	1,903,576	553,099
523	Lyell Twp. Line—Hwy. 60	134,136	98,270
524	Hwy. 522—Hwy. 534 (E. of Restoule)	—	35,185
525	Gravenhurst Sanatorium Road	—	144,773
526	Hwy. 69—W. of Britt	—	62,972
527	Jct. Hwy. 11 & 17 Northerly	1,457,758	1,021,021
528	Wolseley Bay—Hwy. 64	45,513	93,319
528A	Pine Cove Landing—Hwy. 528	—	35,350
529	Hwy. 69—Hwy. 69 (Magnetawan River)	—	125,944
529A	Hwy. 529—Bayfield Wharf	—	62,972
531	Bonfield—Hwy. 17	332,252	26,023
532	Hwy. 11 (S. of Bracebridge)—Hwy. 69	755,197	69,663
533	Mattawa—Hwy. 63	252,773	446,363
534	Powassan—Restoule	183,892	274,560

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
		$	$
535	Hwy. 64—Riviere Veuve	852,376	426,589
537	Hwy. 69—Hwy. 17 (Wahnapitae)	—	232,560
538	Algoma Miners Loop	913	38,125
539	Hwy. 64—Warren	355,038	255,556
539A	Hwy. 539—Tert. Road 805	394	33,394
540	Little Current—Meldrum Bay	1,019,319	1,029,824
540A	Hwy. 540—Barrie Island	—	75,667
540B	Manitoulin Island	—	9,521
542	Hwy. 68—Gore Bay	543,101	426,548
542A	Hwy. 542—Tehkummah	—	62,972
546	Hwy. 17—Mississagai Prov. Park	—	463,938
547	Hwy. 101—Hawk Jct.	—	27,258
548	Around St. Joseph Island—Hwy. 17	325,480	429,977
549	Lake Panache—Hwy. 17	1,483,247	62,972
550	Sault Ste Marie—Gros Cap	—	70,776
551	Province Bay—Hwy. 540	—	125,943
552	Hwy. 556—Twp. Road (E. of Hwy. 17)	66,780	119,618
553	Massey-Bull Lake Lodge	—	150,782
554	Hwy. 546—Hwy. 129	3,918	73,795
555	Magog Lake—Hwy. 557	—	62,079
556	Hwy. 17 (Heyden) N. Easterly	1,010,541	598,481
557	Blind River Northerly	353,361	152,576
558	Haileybury—Montreal River	32,254	128,739
559	Hwy. 69 Nobel—Hwy. 69	11,676	99,475
560	Hwy. 11—Hwy. 144 (S. of Gogama)	63,266	848,491
560A	Westree—Hwy. 560	--	54,930
561	Bruce Mines—Hwy. 638	761	92,004
562	Hwy. 11 (E. of Thornloe)—Hwy. 65	300,960	47,872
563	Batchawana—Hwy 17	6,588	29,385
564	Blanche River Bridge—Hwy. 112	—	55,448
565	Pte Aux Pins—Hwy. 550	—	7,002
566	Matachenan—Ashley Mine	18,343	129,275
567	E. of Silver Centre—N. Cobalt	—	156,536
568	Hwy. 11—Kenegami	—	8,904
569	Hwy. 11—Hwy. 11 (S. of Englehart)	118,520	166,577
570	Sesekinoko—Hwy. 11	—	12,403
571	Hwy. 562—Earlton	3,110	25,103
572	Hwy. 11 Ramore—Hwy. 101	14,450	185,434
573	Charlton—Hwy. 11	—	84,534
574	Cochrane—Norembega	139,464	123,639
575	Jct. Hwy. 17—Jct. Hwy. 64	38,692	126,076
576	Hwy. 101—Kam-Kotia Mine	—	99,063
577	Hwy. 101—Iroquois Falls	—	113,941
578	Iroquois Falls—Hwy. 11	—	59,227
579	Cochrane—Gardiner	6,005	150,143
580	Hwy. 11—Lake Nipigon	—	108,476
581	Hwy. 11—Remi Lake	—	43,197
582	Hwy. 11 & 17—Loop at Hurkett	83,385	26,334
583	Mead—Lac Ste Therese	119,920	202,227
584	Hard Rock Mine—Nakina	2,695,753	351,977
585	Hwy. 11—Pine Portage	149,910	290,475
586	Hwy. 11—Lower Shebandowan Lake	—	21,809
587	Silver Islet—Hwy. 11 & 17	8,550	174,861
588	Stanley—Round Lake Road	14,166	287,798
589	Hwys. 11A & 17A—Dog Lake Road	15,568	130,222
590	Hwy. 130—Hwy. 588 (Nolalu)	104,652	99,578
591	Hwy. 589 Northerly	—	82,260
592	Hwy. 11 (Nover)—Hwy. 11	53,863	82,531
593	Hwy. 61—Hwy. 588 (Nolalu)	—	223,227
594	Dryden—Hwy. 17	11,541	165,331
595	Hwy. 597—Hwy. 590	152,732	205,430
596	Kenora—N. of Minaki	1,826,698	387,814
596A	Kenora	24,410	—
597	Pardee—Hwy. 608	—	77,158
598	Hwy. 604—Hwy. 128 (N. of Kenora)	—	15,155
599	Ignace—Tert. Road 808	1,836,951	1,246,811
600	Hwy. 71—Rainy River	8,644	338,275
601	Hwy. 17—Dryden	—	87,836

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
		$	$
602	Fort Frances—Emo	138,745	163,776
603	Hwy. 17—Dyment	—	15,736
604	Hwy. 17—Kenora Airport	7,001	30,865
605	Hwy. 17—Eton—Rugby	2,048	41,152
607	Hwy. 69—(Big Wood—Hwy. 64)	6,369	58,888
607A	French River—Hwy. 607	—	12,981
608	Hwy. 61—Hwy. 595 (S. Gillies)	126,009	79,586
609	Hwy. 105—Clay Lake	—	58,152
610	Hwy. 67—Hwy. 101 (Hoyle)	11,270	83,819
611	Hwy. 602 (Sherwood) Northerly	—	72,096
612	Hwy. 103 (Mactier)—Hwy. 69	—	21,316
613	Hwy. 602—Lake Despair	21,744	132,729
614	Hwy. 17—Manitouwadge	—	244,526
615	Hwy. 17—Burditt Lake	—	157,001
616	Hwy. 101—Palomar	—	12,723
617	Hwy. 11 (Stratton)—Hwy. 600	—	85,135
618	Red Lake—Madsen	—	38,458
619	Hwy. 11 (Pinewood)—Hwy. 621	13,948	180,188
620	Hwy. 62—Hwy. 28 (Apsley)	26,198	198,496
620A	Hwy. 28—Hwy. 620	—	2,444
621	Hwy. 11—Lake of the Woods	700	324,351
622	Hwy. 11 (Atikokan) Northerly	—	41,244
623	Hwy. 11—Sapawe	—	20,574
624	Hwy. 11—Larder Lake	8,075	184,656
625	Caramat—Hwy. 11	—	339,988
626	Jct. Hwy. 17 to Marathon	350	16,786
627	Heron Bay—Hwy. 17	—	55,230
628	Red Rock—Hwys. 11 & 17	92,172	65,548
629	Timmins—Timmins Airport	147	43,847
630	Kiosk—Hwy. 17	—	175,321
631	Hwy. 17—Hwy. 11	1,419,182	770,019
632	Hwy. 118—Rosseau	—	57,389
633	Hwy. 11—Kawene	—	24,690
634	Smooth Rock Falls— Fraserdale	242,409	319,279
635	Hwy. 17—Ottawa River Bridge	—	12,981
636	Hwy. 11—Frederick House	—	20,523
637	Hwy. 69—Killarney	1,190,338	395,654
638	Dunns Valley—Echo Bay	—	204,635
639	Hwy. 108—Hwy. 546	—	130,672
640	Hwy. 571—Earlton Airport Entrance	—	12,130
641	Hwy. 17—Pellatt	7,001	55,214
642	Hwy. 599—Sioux Lookout	—	359,042
643	Hwy. 584—Twp. Road to Cavell	—	80,364
644	Hwy. 69 (Pte. Au Baril) Westerly	—	62,972
645	Hwy. 529—Bing Inlet	2,385	124,721
646	Pickle Crow—Central Patricia	68,000	30,861
647	Hwy. 17—Blue Lake Prov. Park	—	37,552
648	Dyno Mine—West Jct. Hwy. 121	941,635	179,918
649	Bobcaygeon—Hwy. 121	—	107,126
650	O.N.R. Right-of-way—Hwy. 12	21,100	38,380
651	Hwy. 101—Missanabie	—	251,485
652	Wade Lake—Kwy. 574	8,662,868	630,298
653	Portage Due Fonte Bridge Hwy. 17	—	55,751
654	Hwy. 11—Nipissing	11,282	176,883
655	Timmins—Ward Kidd Twp. Boundary	10,581	346,689
656	Hwy. 533 Northerly	11,248	24,340
657	Gold Pines—Hwy. 105	1,520	30,161
659	Hwy. 604—Hwy. 128	2,055,620	87,118
661	Gogama—Hwy. 144	600	38,847
663	Hwy. 11 (W. of Hearst) Northerly	—	21,801
664	Hudson—Hwy. 72	—	53,760
665	Hwy. 17—Richan	—	178,074
666	Kenora—Redditt	1,695,226	134,498
667	Hwy. 129—Sutton	—	160,904
	TOTAL SECONDARY HIGHWAYS	**44,252,545**	**28,318,289**

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
	TERTIARY ROADS		
800	Hwy. 11 & 17 N. of Whistle Lake	—	28,473
801	Hwy. 11—Namewankan River	—	64,108
802	Hwy. 11—Burchell Lake	—	63,593
803	Hwy. 575—(Hwy. 101-3 Mile South)	—	15,849
804	Hwy. 105 (Lower Manitou Falls)	—	32,475
805	Hwy. 539A (River Valley)—Pond Lake	16,341	111,773
808	Hwy. 646—Otosilwin River	—	15,016
809	Hwy. 564—End of Highway	—	17,157
810	Hwy. 553—Richie Falls	—	200,151
811	Tertiary Road 800 Northwesterly	—	253,061
	TOTAL TERTIARY ROADS	**16,341**	**801,656**
	ACCESS, INDUSTRIAL & ARTERIAL ROADS		
708	Marchington Lake Road	404,575	19,528
709	Anaconda Road	—	26,543
751	Arterial Road—Jane St. S'ly to S. Queens Drive	10,230	—
771	Kodak Access Road	123,002	—
773	Garden Lake Road	—	94,995
785	Bending Lake Access Road	4,879,137	—
792	Hwy. 17—Dubreauilville Townsite	51,970	70,494
795	Sherman Mine Road	—	3,289
799	Caramat—Manitouwadge Road	—	52,708
	TOTAL ACCESS, INDUSTRIAL & ARTERIAL ROADS	**5,468,914**	**267,557**
	UNINCORPORATED TOWNSHIPS		
2	Indian Reserves	76,645	761,334
7	Special Settlers	314,966	47,913
9	Local Roads Boards	1,042,067	5,528,114
99	Statute Labour Boards	72,352	158,863
	TOTAL UNINCORPORATED TOWNSHIPS	**1,506,030**	**6,496,224**
	SPECIAL PROGRAMS		
450	Other Ferry Services	—	3,291,745
735	Kitchener/Waterloo Expressway	513,662	524,477
797	Airstrip Development	4,634,208	2,336,140
952	Sidewalks	66,113	—
7087	E.C. Row Expressway	844,986	246,613
7118	Brantford Expressway	177,822	23,618
7154	Harbour Expressway (Thunder Bay)	5,096	—
7182	Woodstock By-Pass	—	94,648
8905	Lands & Buildings	953,789	2,673,750
8954	Weigh Scales	116,442	381,074
	Development Roads	5,774,318	—
	Connecting Links	20,200,564	2,281,911
	TOTAL SPECIAL PROGRAMS	**33,287,000**	**11,854,976**
	HIGHWAY TOTALS	**340,723,056**	**173,332,892**
	Sundry Unallocated, District Office Administration, Engineering Buildings, Inventory Charges, etc.	(71,592,534)	32,594,934
	TOTAL EXPENDITURE	**269,130,522**	**205,927,826**

MTC ANNUAL REPORT

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